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SEPTEMBER 1953

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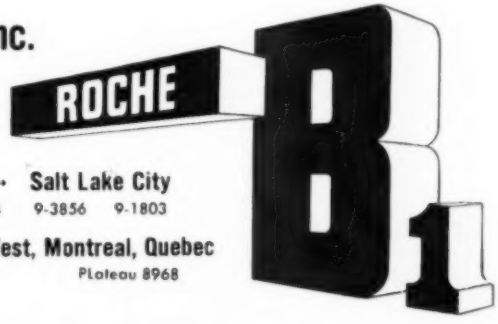

DRUG & COSMETIC INDUSTRY

SEPTEMBER, 1953

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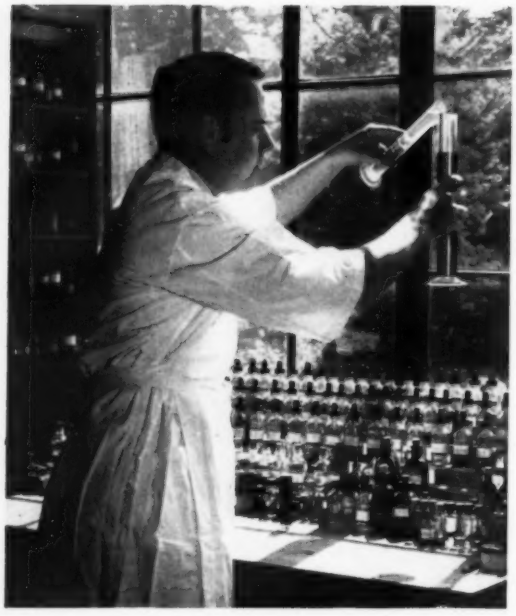

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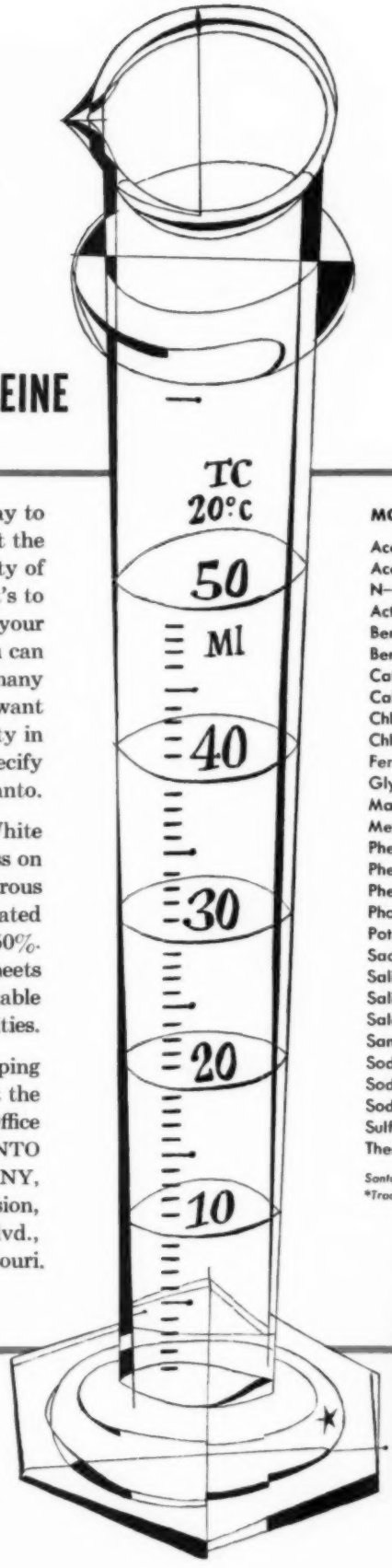

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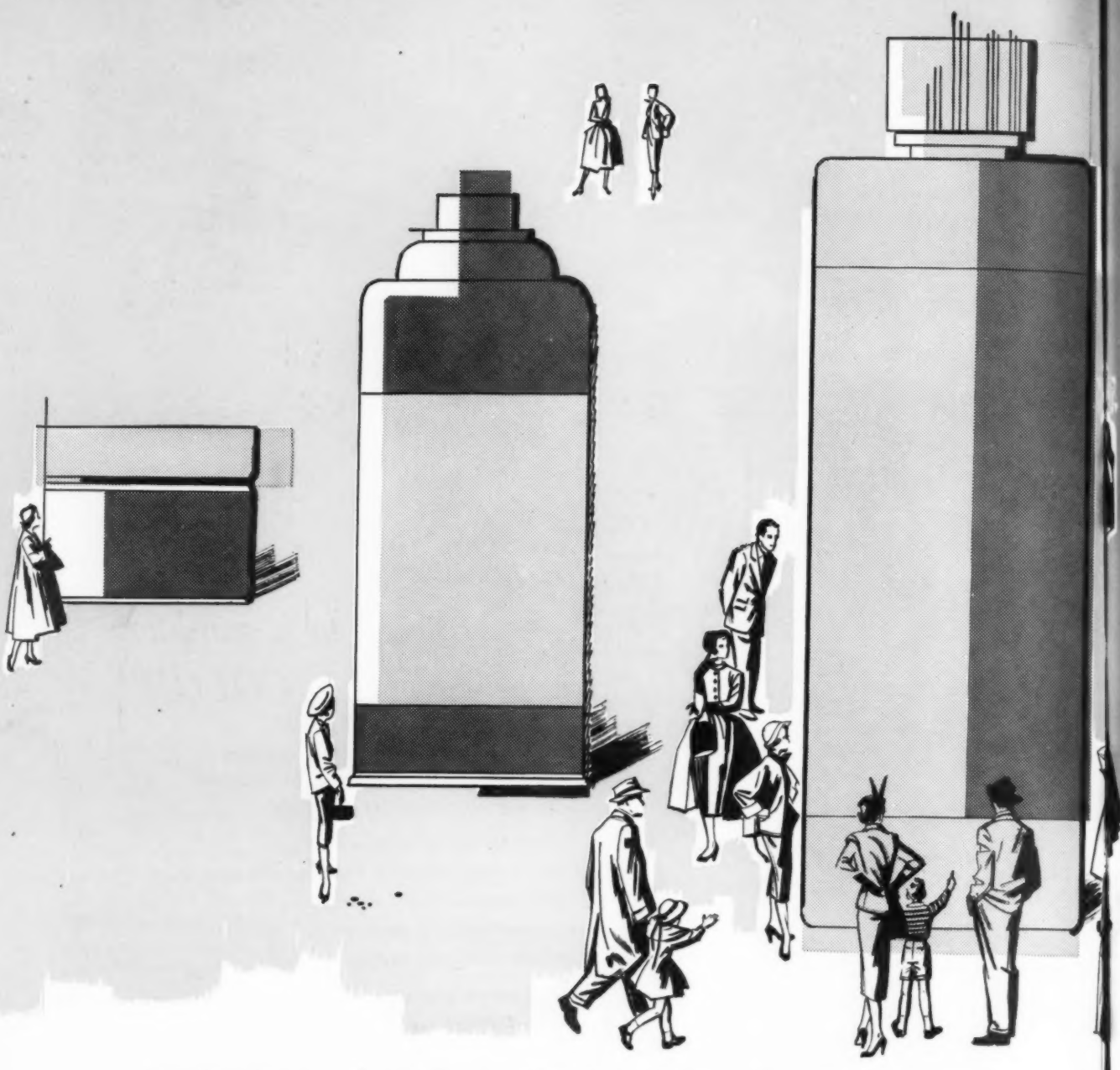

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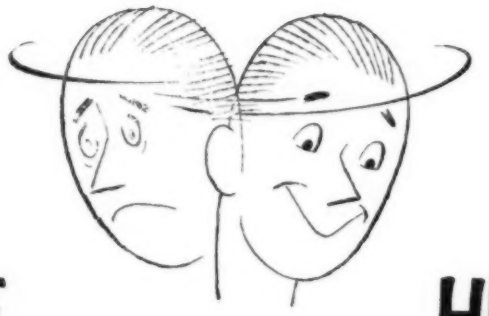

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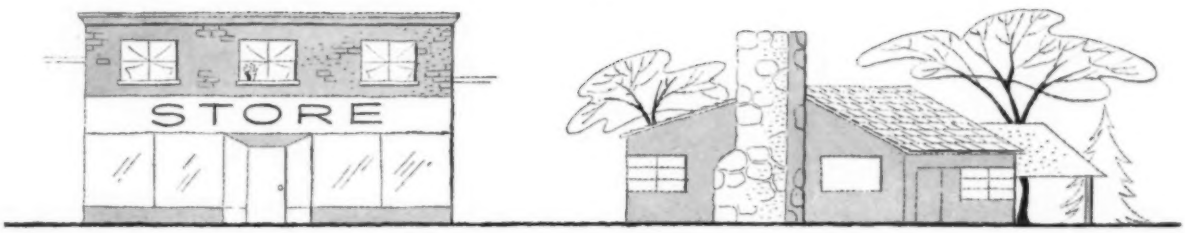

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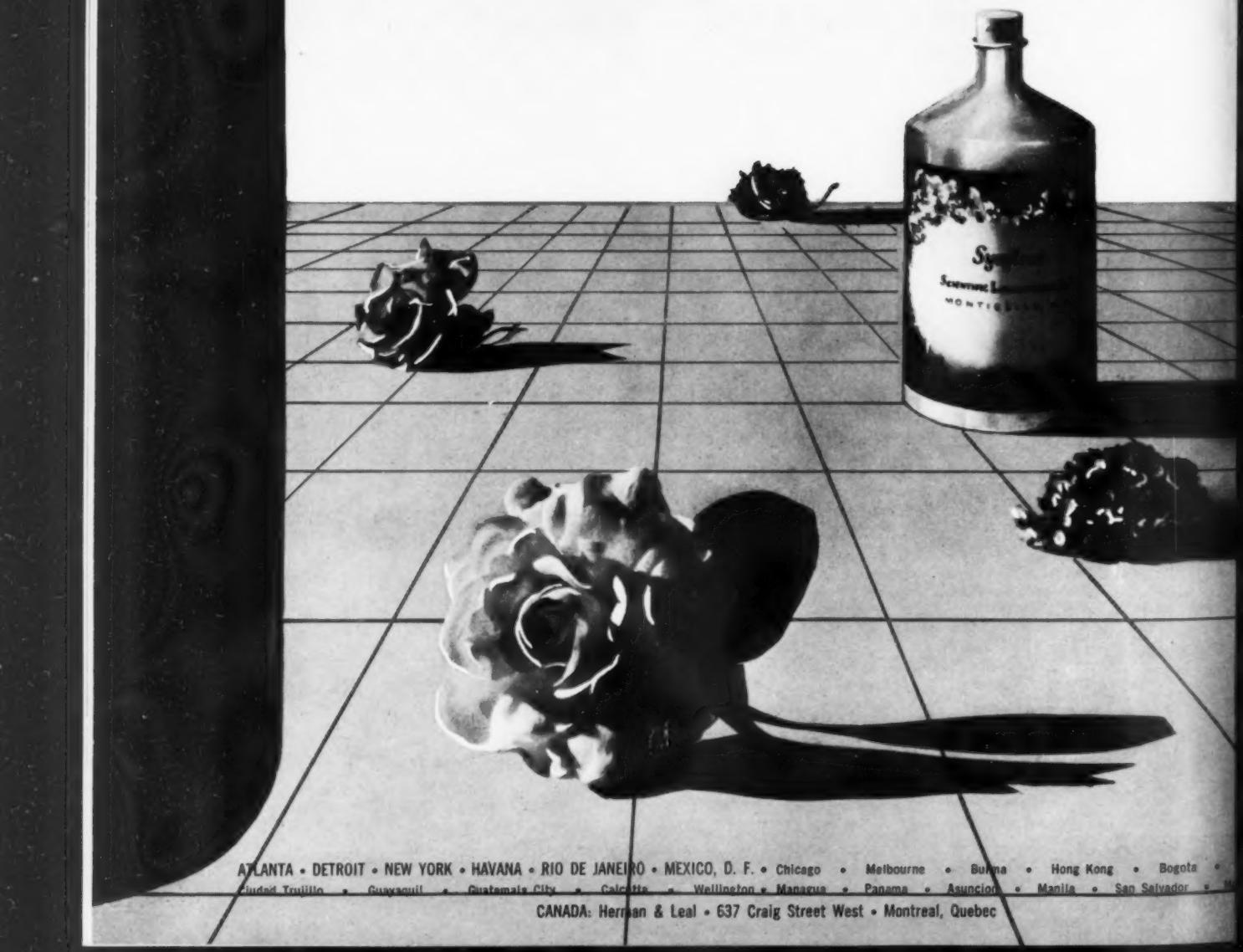

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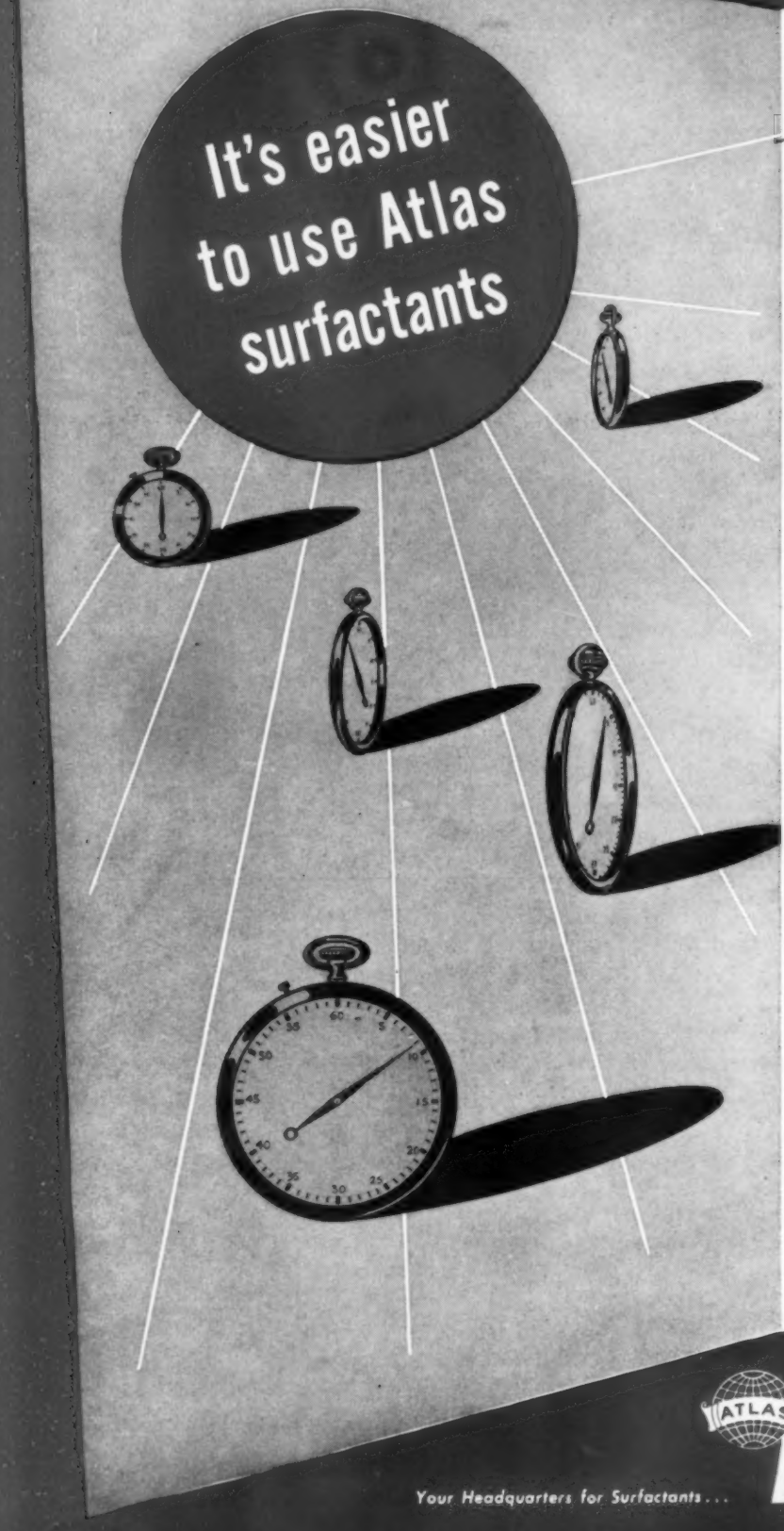

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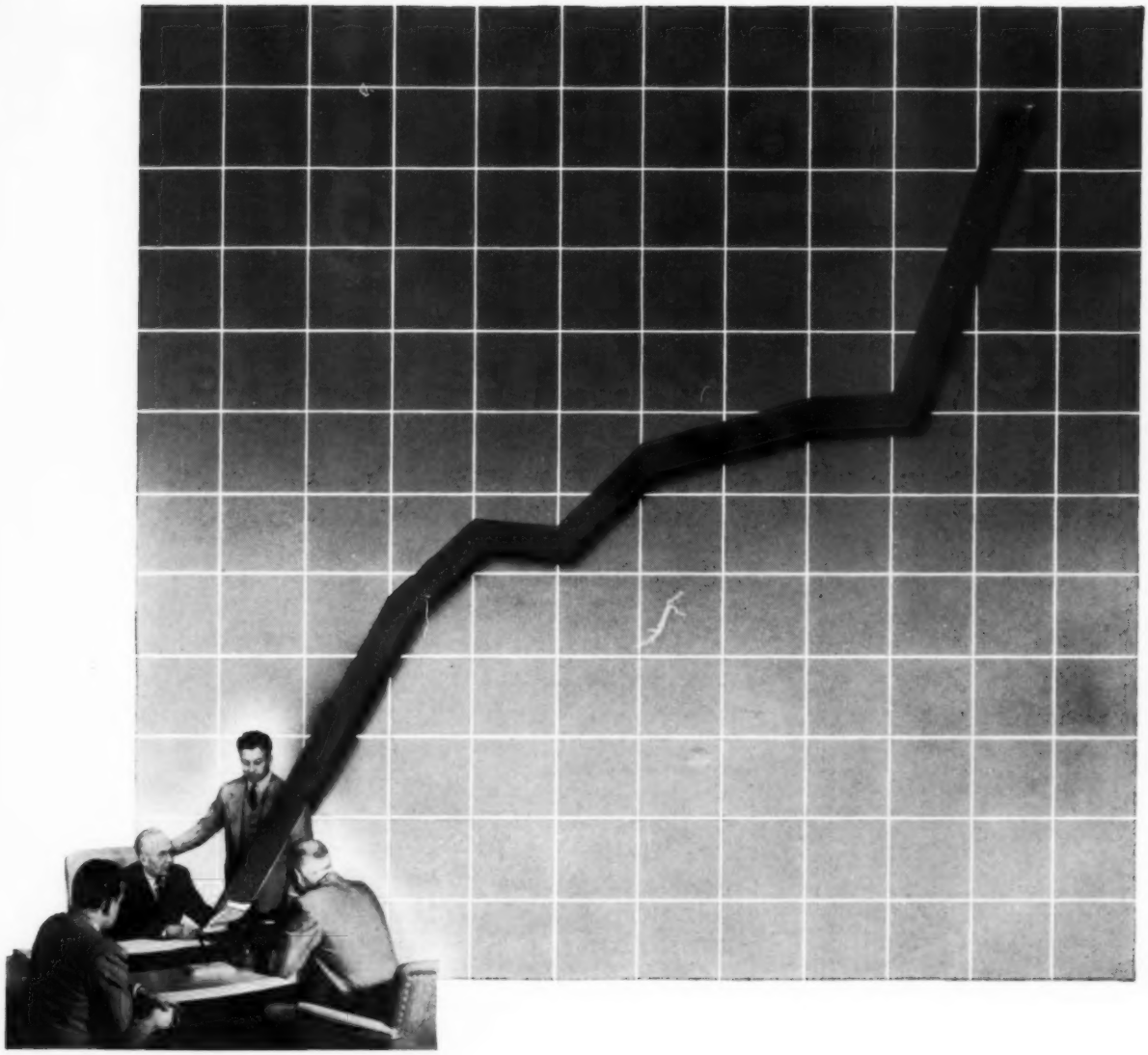

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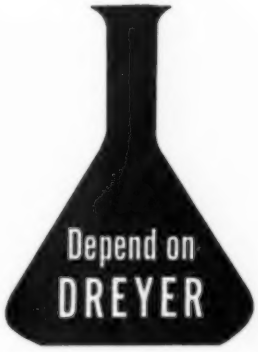

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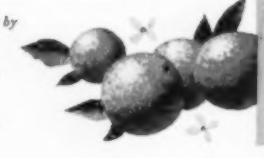

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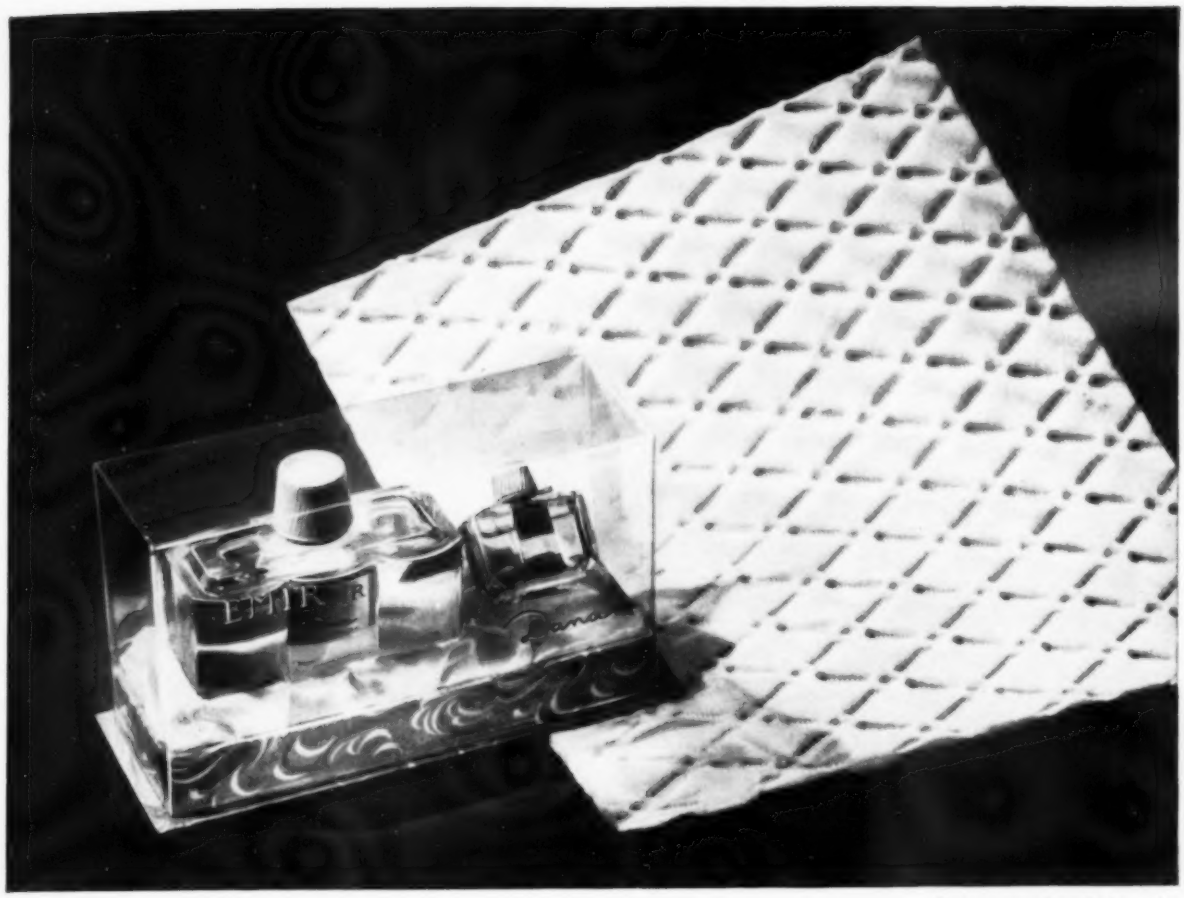

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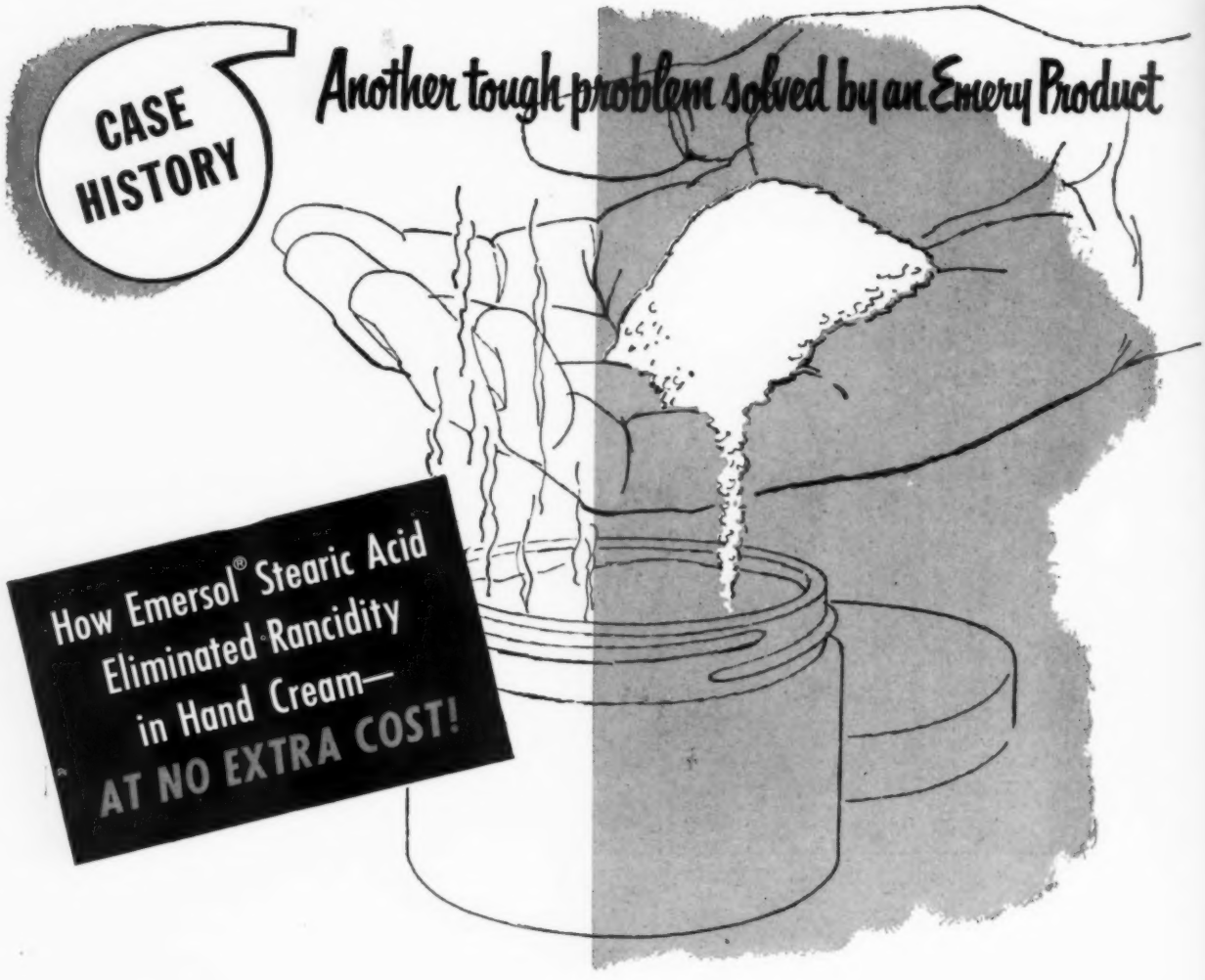

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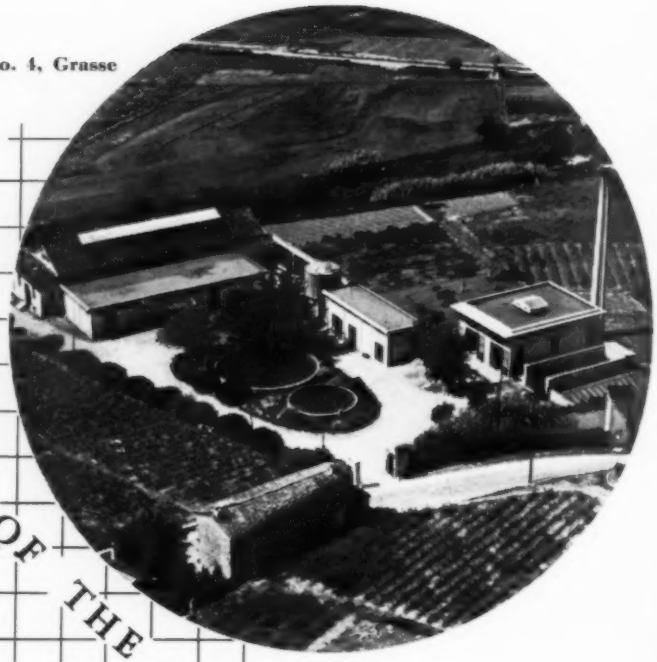

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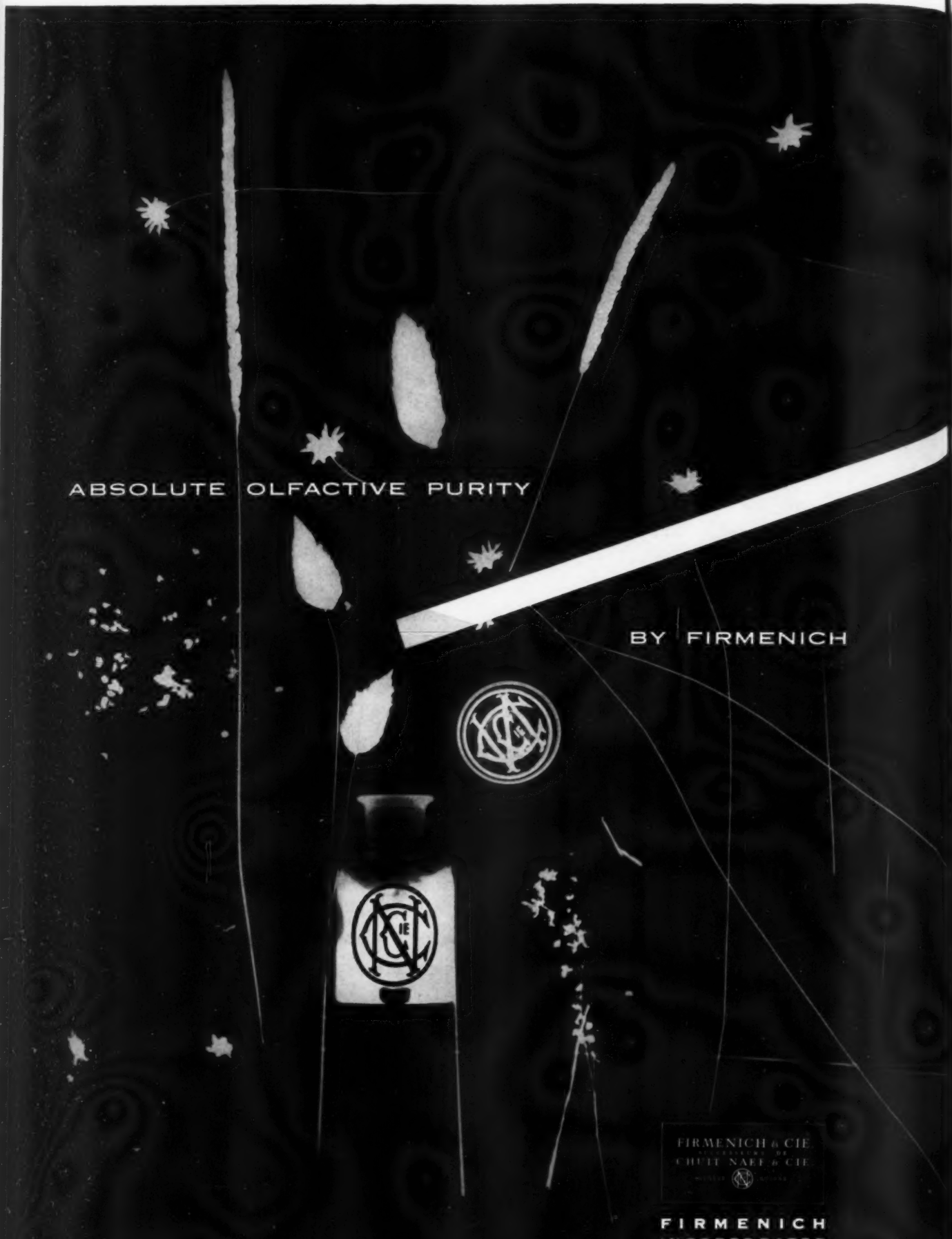
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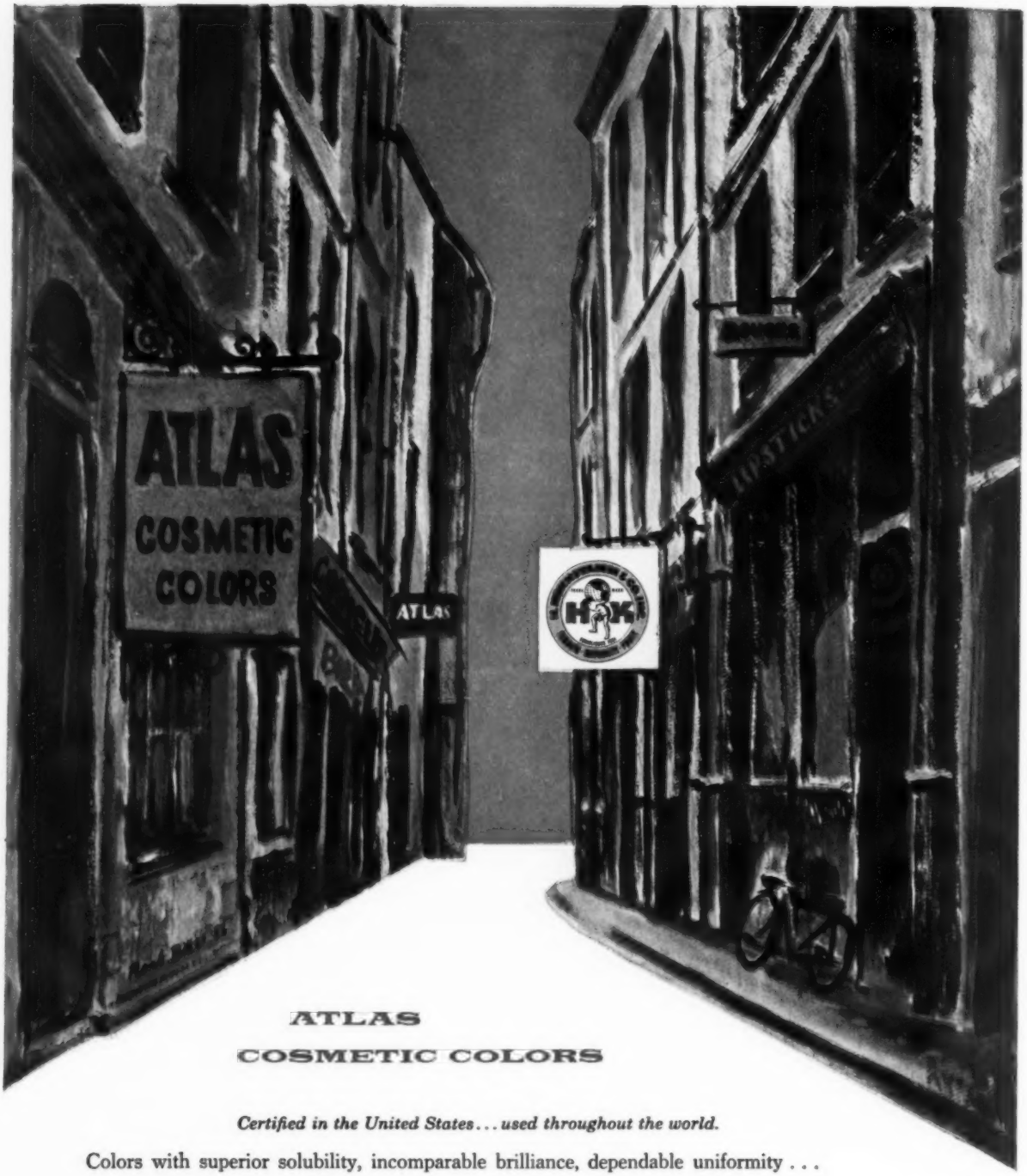

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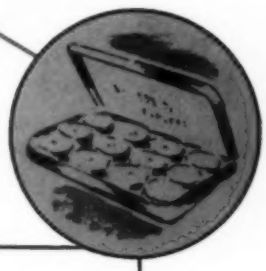

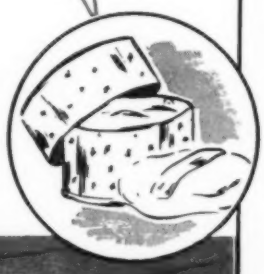

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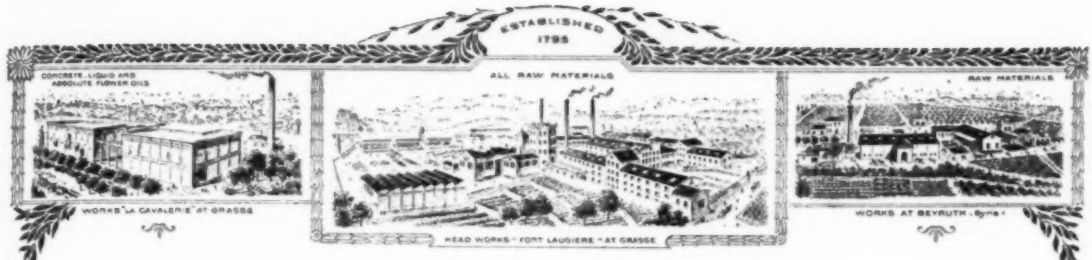

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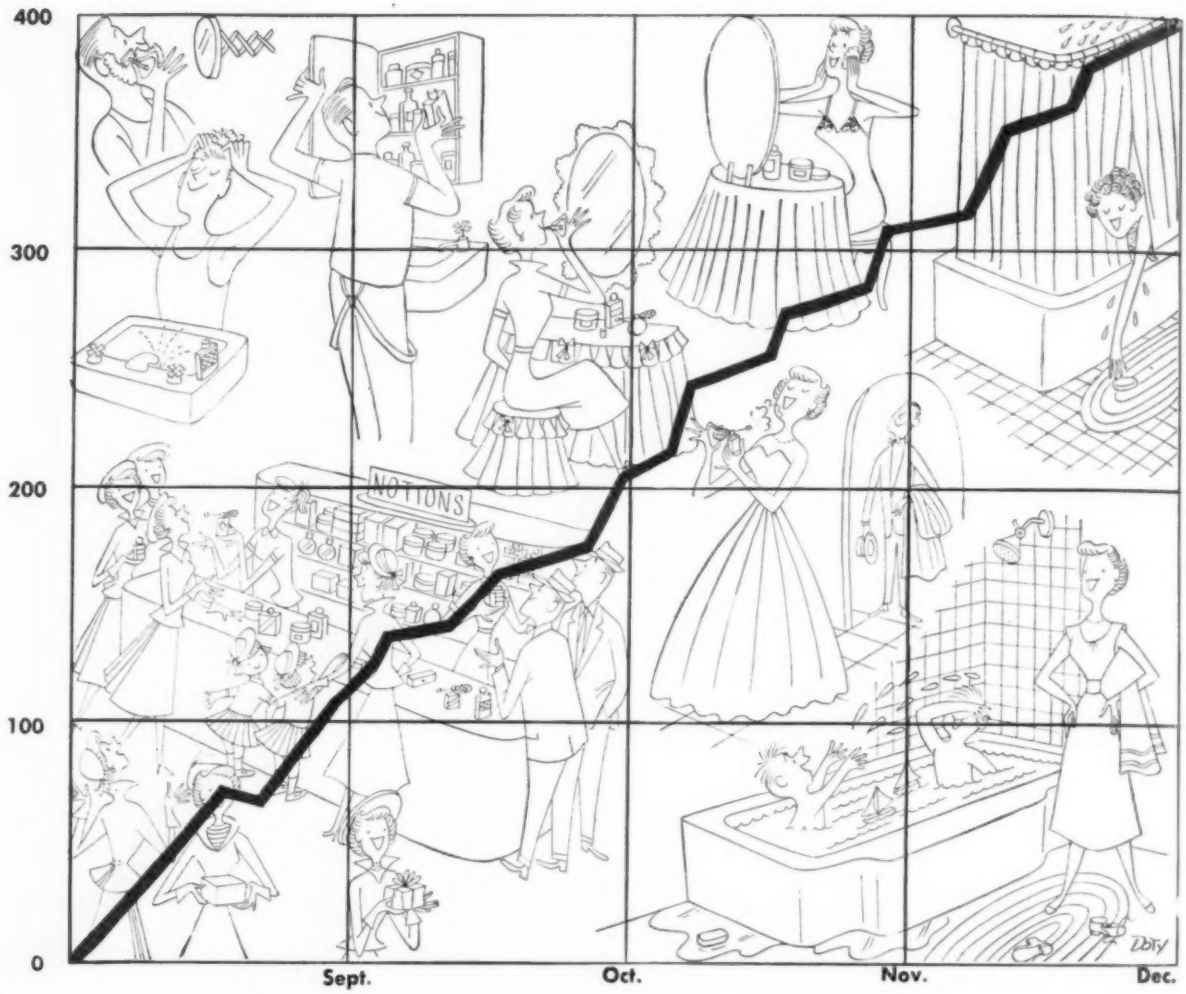

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Vitamins (√) Thiamine Hydrochloride USP (Vitamin B_1) Powder and Special For Parenteral Solutions; Thiamine Mononitrate USP Powder; Acid Ascorbic USP (Vitamin C) Powder, Granular, Fine Granular and Special For Parenteral Solutions; Pyridoxine Hydrochloride (Vitamin B_6 Hydrochloride) Crystalline Powder; Niacin USP (Acid Nicotinic) Powder; Niacinamide USP (Nicotinamide) Powder; Riboflavin USP (Vitamin B_2) Crystalline Powder; Vitamin B_{12} USP Crystalline Not Sterile; Vitamin B_{12} Solids; and Calcium Pantothenate Dextrorotatory Powder.

Acetophenetidin USP (√) Analgesic and antipyretic. FORM: Powder.

Acid Acetylsalicylic USP (√) Analgesic and antipyretic. FORMS: Powder 80 Mesh, Crystals 20 Mesh and Crystals 40 Mesh. Also starch mixtures for compounding.

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Iodides (√) Potassium Iodide USP Crystals, Granular and Powder; Sodium Iodide USP; Iodine USP Resublimed Crystals and Granular; Iodoform NF Heavy Powder and Light Powder; Thymol Iodide NF Powder; and many others with one or more forms available.

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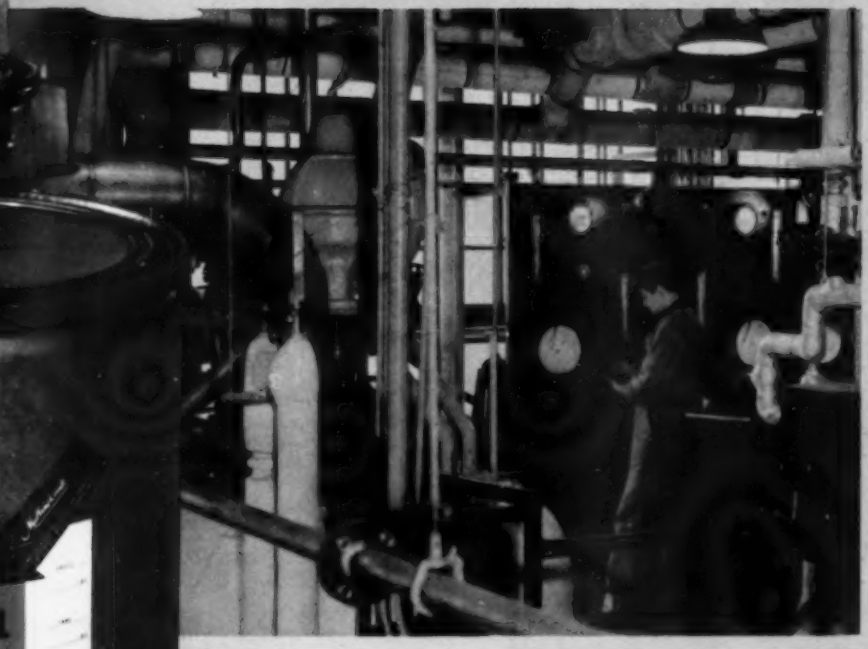

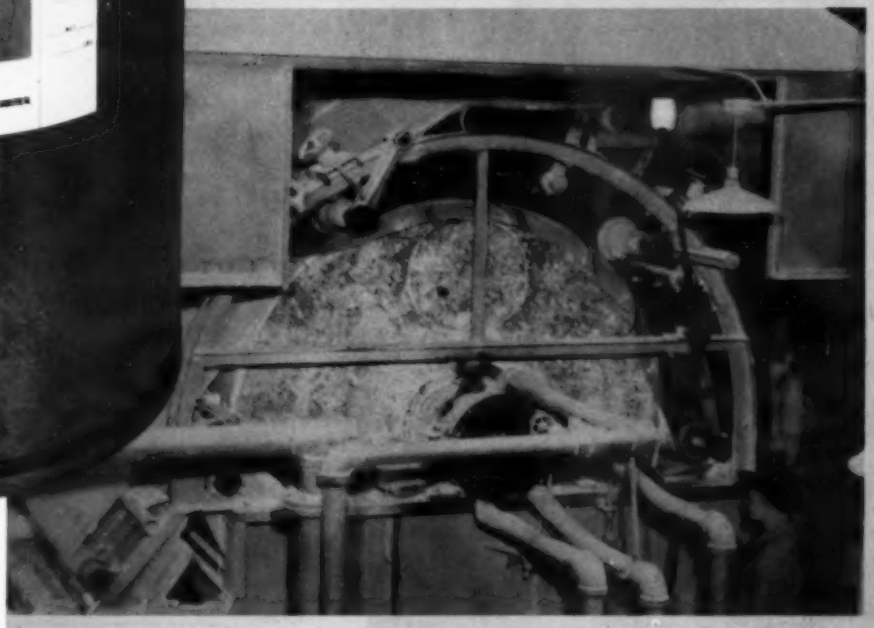

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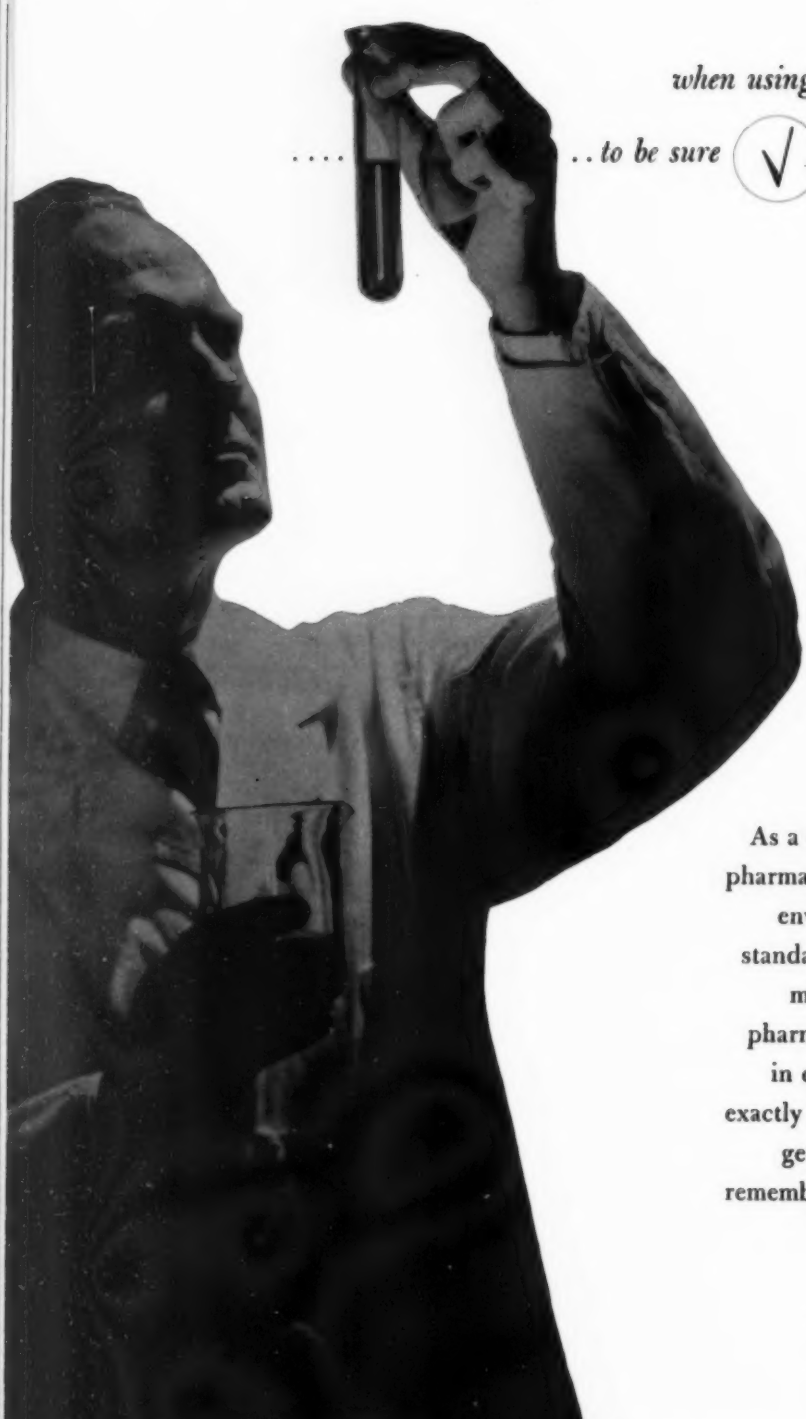

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The Latest in Tooth Paste

The latest thing to save your teeth—at least as far as dental caries or tooth decay is concerned—is to knock out the enzymes present in the mouth. It is these enzymes, it is said, which convert the carbohydrates in the mouth into acid which causes decay. At least this is the story behind the newest tooth paste to be introduced in the market. This is Lambert Pharmacal Company's Listerine Antizyme, which, it is said, is the result of over two years of experiments at two leading dental schools and Lambert's own laboratories.

"Decay acids are produced when bacteria in the mouth attack carbohydrates," says Lambert, "and enzymes present in the bacteria immediately convert the carbohydrates into decay acids."

"An odorless, colorless, tasteless and harmless ingredient in the tooth paste, known as an anti-enzyme, blocks the enzymes from converting carbohydrates into tooth decay acids," according to the company. "Tests have proved that with just one brushing in the morning, all day immunity to these acids is achieved, and with morning and evening brushing continuous immunity results."

Using a pH meter to measure the acidity of the mouth, Lambert claims that if the pH is above 5.6, dangerous acidity is not present. Between 5.6 and 5.2 is the danger zone, and below 5.2 is the decay zone. "Tests prove," says Lambert, "that with a single morning brushing with Listerine Antizyme, one can eat sweets, starches and drink all the soda pop desired, yet in short period checks on the acidometer a 5.6 status is maintained in the mouth. All other leading tooth pastes offer protection from a few minutes to no longer than 30 minutes after using, after which any carbohydrate ingestion results in the pH meter status dropping below 5.2 (decay in progress)."

But Lambert is not the only dentifrice manufacturer entering the market with a tooth paste of this sort. The idea comes from the work of Dr. Leonard Fosdick, of Northwestern University Dental School, who has been developing and testing anti-enzyme compounds to retard tooth decay. The word is that at least some of the other big dentifrices are going to get aboard the new theory in control of tooth decay, and they are not to wait as long as they did in the case of other recent developments such as ammoniated dentifrices and chlorophyll dentifrices. Colgate, Block Drug Company (makers of Ammident), Kolynos, Bristol-Myers, and others are all studying the development and have arrived at various decisions. But one may be certain that Lambert will not be left with the field to itself.

So, according to the makers of this new preparation, one can forget all about the l.a. (lactoacidophylus) count which was recently claimed to be the cause of tooth decay and which is reduced to the safety zone by using ammoniated dentifrices. Also you might as well give up the idea of insisting on chlorophyll in your tooth paste with its green color. A new theory, a new ingredient, and a new product are at hand. Off with the old, on with the new, in dental hygiene.

Drug Stocks in Fund

Eight leading drug concerns were represented in the common stock holdings of the $252 million Wellington Fund on June 30, last. Investment in these companies included 55,000 shares of Merck & Co., 22,000 shares of McKesson & Robbins, 25,000 shares of Chas. Pfizer & Co., 18,000 shares of Sterling Drug, 12,500 shares of Smith, Kline & French Laboratories, 32,000 shares of Mead, Johnson & Co., 15,000 shares of Allied Laboratories, and 10,000 shares of Parke, Davis & Co. As of June 30, these holdings had a market value of $4,867,500, and represented 1.93 per cent of the total fund.

Hypercin to Stop Claims

Representing that Hypercin is a cure or remedy for stomach ulcers is prohibited by a stipulation signed by Consolidated Royal Chemical Corp., and Hypercin, both of Chicago, according to the Federal Trade Commission. Also prohibited are claims that:

1. Hypercin is effective in relief of stomach pains and stomach distress, without regard to cause.
2. It will do more than neutralize excess acid in the stomach and temporarily relieve symptoms of pain and distress caused by an excess acid condition.

3. Such relief as the preparation will afford is accomplished in seconds, or nothing else is effective.
4. It protectively coats the lining of the stomach.
5. It speeds up the emptying time of the stomach.

Business and Manufacturing Censuses

The Census of Manufactures and the Census of Business, planned for next year by the Bureau of the Census, will not make their appearance. They will be replaced by a series of spot samplings to give a limited picture of national and regional production and sales in most lines of business. It appears that, due to an agreement between the House of Representatives and the Senate, only $1,500,000 is being provided for this work instead of the $9,400,000 asked by the Administration. This virtually wipes out the Industry and Business divisions of the Bureau of the Census, it is said. As a result, the Bureau has scrapped plans for the widespread censuses which, by law, are supposed to be taken every five years, and is firing about 700 employees. It will be recalled that these censuses were originally taken every two years, but following the war, during which they were suspended, under the administration of President Truman, the time between them was increased to five years

Generic Name Approved for Aureomycin

Chlortetracycline is now the official generic name for Aureomycin. Congress enacted and President Eisenhower signed into law a bill which changed the name in the certification amendment to the Federal Food, Drug, and Cosmetic Act from Aureomycin to chlortetracycline. This removes the name Aureomycin from the public domain and thus enables Lederle Laboratories to trade-mark Aureomycin for its protection mainly in foreign countries. From this point on, therefore, Lederle's product will be Aureomycin brand of chlortetracycline.

Franchised Dealers and Cut Prices

Interesting in the consideration of the status of fair trade at the present time is the statement by General Electric that the Vim Television and Appliance Stores—operator of 54 stores in the New York area—are not a franchised dealer in G.E. large household appliances. Vim had been advertising and selling a nine and one-half foot G.E. refrigerator at $50 under the suggested retail price, and an eleven foot G.E. food freezer at $110 under the suggested retail price. G. E. announced that they had sent letters to all G.E. dealers in the area affected informing them of the fact that Vim was not franchised to sell G.E. appliances.

According to the New York Times, G. R. Brownback, manager of General Appliances, Inc., a wholly-owned subsidiary of General Electric," emphasized that he did not write (the letter) on any spirit of vindictiveness against Vim."

Vim's answer is merely: "We have thousands of people from all over the United States every day offering us merchandise, including General Electric refrigerators and other large household appliances. These items are offered to Vim at substantial savings. It has been and will continue to be our policy to pass these savings on to the public in the form of lower prices in our stores." It looks to us like another case of overloaded dealers who have to get out from under. But what about fair trade, is the franchise system supposed to take care of that, or what gives?

Campaign for WMA Members

A large advertising campaign is now under way designed to encourage American doctors to join the United States Committee of the World Medical Association. The world group is devoted to the interests of freedom in medicine and to the exchange of new medical experience. It is also noted for extensive research projects and studies of the educational requirements everywhere. The campaign is a cooperative venture between medical advertising agencies and medical journals. Contributing to the campaign are the following agencies who have formed a committee to work with the World Medical Association: L. W. Frohlich & Company, William Douglas McAdams, Noyes & Sproul, Cortez Enloe, Paul Kempner, and Robert Wilson. Layouts of advertisements are being done at L. W. Frohlich; copy is being prepared by Cortez Enloe; medical journals are contributing space; for example, most of the state journals donated one page a month for eight months. "What Affects World Medicine Affects You" and "This Is Your Only Voice in World Medicine" are the themes. Advantages of membership to civilian, military and retired physicians are emphasized. Letters of introduction to foreign groups for use during trips, representation before the World Health Organization and others, and quarterly Bulletins reporting medical advances, are incentives.

Toni Celebrates Ninth Year

The Toni division of the Gillette Company celebrated its ninth anniversary recently with known nationally distributed hair care products and a record of over 200 million home wave kits sold since its founding in July, 1944, according to R. N. W. Harris, president. Statistics show, according to the Toni statement, that at present 65 per cent of the women over 15 years now wave their hair at home, a significant contrast with 1943, when only one woman out of a hundred had tried her hand at home wave technique.

Silver Curl, the new home permanent for gray, partly gray and snow hair, is the latest Toni product added to a line-up of neutralizing, self-neutralizing, pin-curl and children's home permanents. Beside home wave kits, Toni markets Plastic and Spin Curlers, White Rain Lotion Shampoo, Toni Creme Shampoo and Toni Creme Rinse.

Baldness and Virility

Bald men are likely to be more virile than those with a thick thatch of hair, says a medical correspondent to the British Medical Association's magazine, Family Doctor. The writer says this theory is supported by the large-scale research into the relationship of virility

that has been carried out by Dr. J. B. Hamilton of the New York State University, College of Medicine in Brooklyn, N. Y. In a group of men who were found by biochemical tests to be deficient in male sexual hormones, nineteen out of twenty did not develop "recessions" of the hairline, Dr. Hamilton was said to have found. However, when they received proper gland treatments they immediately proceeded to develop recessions, which "betoken sexual maturity," according to Dr. Hamilton.

The writer in the Family Doctor adds that: "If two men have the same heredity tendency to go bald, the more virile man as revealed by biochemical tests is practically certain to go bald; the man whose glands are less active has a better chance of keeping his thatch."

More Glycerine Production

Still more glycerine production is being planned in this country. Last month we reported on a proposed plant to be erected by The Dow Chemical Company for the production of synthetic glycerine. Now the Shell Chemical Co. announces plans for the erection of a plant at Norco, La. which will increase Shell's production of this chemical by 25 million pounds per year. This new plant will produce allyl chloride and epichlorohydrin in quantities sufficient to increase Shell's glycerine production by 25 million pounds, and also to make available substantial additional quantities of epichlorohydrin and Spon resins.

3-D and the Eyes

Interesting is the fact that early last month, Dr. Herman N. Bundesen, president of the Chicago Board of Health, sent telegrams to the Chicago motion picture theaters forbidding the reissue of Polaroid glasses for viewing three-dimensional moving pictures. The Chicago board reported that of fifteen pairs of glasses used in movie theaters, nine revealed a cast of organisms that might cause infections of the eye, skin, or throat. It's time this industry did something to take care of this situation.

Aerosol Package Awards

The best aerosol packages of the year are to be selected at the second annual Aerosol Festival to be held in conjunction with the fortieth meeting of the Chemical Specialties Manufacturers' Association, Mayflower Hotel, Washington, D. C., December 7 and 8. The competition and awards are divided into seven classifications which include insecticides; moth products; room deodorants; lacquers, paints, enamels; other household products,—waxes, polishes, glass cleaners, etc.; personal products—shave lather, shampoos, body deodorants, hair lacquer, sun tan oil, etc.; and miscellaneous—novelties, drugs, lubricants, etc.

The judges thus far selected are Florin Hailer, vice-president of the Rexall Drug Company, and Mrs. Charlotte Montgomery of Tide. Other judges will include a housewife, a retail merchant, and a designer. The awards committee is under the chairmanship of Ira P. MacNair, publisher of Soap and Sanitary Chemicals, and other committee members are Frank Zumbo, of E. I. du Pont de Nemours & Co., and Fred Lodes, of Precision Valve Corporation.

Packaging Institute Forum

The Packaging Institute's Fifteenth Annual Forum is to be held this year at the Hotel Statler, New York, on October 12-13-14. Seventeen different seminars on various aspects of packaging are planned for the three-day meeting, according to E. H. Balkema, of Colgate-Palmolive-Peet Company, chairman of the Program Committee.

Of specific interest to drug and pharmaceutical manufacturers are the two seminars to be held on Tuesday, October 13. These are Drug and Pharmaceutical I—printing on glass, types of glass, and unusual packages; and Drug and Pharmaceutical II—hypodermic needle standardization, unsolved packaging problems, optimum paper storage conditions, and heatless sterilization of packages.

The Forum opens with a general session on the subject of What Packaging Should, Can, and Cannot Do. Four seminars are to be held on package printing, and two on production. Other seminars include package design, bulk packaging, packaging as a profession, and new techniques for the packaging engineer.

Walter Williams, Under-Secretary of Commerce, will address the luncheon on the first day, and J. Frank Stephenson will address the luncheon on the third day. Mr. Stephenson's subject will be Pack for Less (never be satisfied).

Committee meetings will be held on food, adhesion, set-up boxes, and production during the Forum.

B-Vimm Claims Prohibited

Claims that B-Vimm constitutes an adequate vitamin, liver, or mineral dietary supplement must be discontinued according to an initial decision by a Federal Trade Commission hearing examiner.

Loynd on Disease Problems

Parke, Davis & Company President Harry J. Loynd stated last month that scientists have made much headway in cancer research in the past ten years. He explained that much information on the sensitivity of the cancer cell to drugs—both in man and animals—has been collected, and better techniques of clinical evaluation have been devised. He quoted Dr. Joseph H. Burcheual, professor of medicine in the Sloan-Kettering Division of Cornell Medical College as saying, "It would be amazing if far greater and perhaps decisive results were not achieved in the next decade."

Parke, Davis has sent 1,500 different chemicals to Sloan-Kettering Institute, according to Mr. Loynd, who said, "We are continuing to do everything we can to find the answers to cancer."

Saying that only a few years back, the drug industry and the medical fraternity felt that much was being accomplished if there was one new drug discovery every twenty-five years, Mr. Loynd added, "today we have come to expect one new discovery about every six

months. The results of this research will benefit all of us and result in a country in which we will live longer and like it."

"There is yet much to be done," said Mr. Loynd, "many of today's unsolved medical problems will require new giants in the future. We have conquered, or controlled, most of the infectious diseases which formerly decimated our population. But now we die, instead, from cancer, heart disease, or kidney and liver diseases. We suffer from arthritis, nervous diseases, high blood pressure, rheumatic fever and a host of other, as yet unsolved, medical entities.

"Too many of the world's people still suffer and die from malaria, leprosy, influenza, plague, tuberculosis, typhus—all controllable, or soon, we hope, to be. Too many children are permanently crippled from rheumatic fever or poliomyelitis—diseases we confidently believe will soon be controlled or prevented."

With respect to the increasing problem of diseases of old age Mr. Loynd pointed out that to the 160 million people now in this country, four million babies are added each year, and the number of people over 65 years of age has jumped to 14 million, and will approach 20 million by 1975.

"Thus," he said, "we are faced with a continuing problem of training enough physicians to adequately care for this large population and particularly for those in the very early and very late years of life. The pharmaceutical industry must share this problem by the development of ever-increasing facilities, both for research and for production of now existent therapy, and for the many new discoveries which are sure to come in the years ahead."

Cosmetic Tax Note

At a hearing before the Ways and Means Committee of the House of Representatives on the subject of the 20 per cent retail excise tax on cosmetics, not only did the witnesses argue for reduction or elimination of the tax, but, for the most part, they also argued that any such tax that was levied be continued at the retail level and not be transferred to the manufacturers' level. George Frates, Washington representative of the National Retail Druggists' Association, was alone in advocating that if the tax were continued at a reduced rate, it be transferred to the manufacturer rather than have it collected by the retailer.

Representatives from other industries upon which retail excise taxes are now levied, such as furs, jewelry, and luggage, including representatives from retail groups in these industries, without exception advocated that the tax be kept at the retail level. Mr. Frates was the only one who advocated otherwise.

ADMA Foreign Law Committee

The American Drug Manufacturers Association has established a Committee on Foreign Law and Regulations with Richard Keresey, vice-president of E. R. Squibb & Sons, division of Mathieson Chemical Corporation, as chairman. The committee will maintain close supervision over developments abroad with respect to the enactment of new laws and regulations, and will keep members of the association informed as to findings of fact and analysis of the laws and regulations.

Shopping Centers

Large shopping centers with ample parking shops are increasing rapidly due to the crowding of old shopping centers on main streets of towns, and also due to large housing developments which are quite remote from any old shopping centers. Another reason for the creation of these centers is the imagination of real estate men.

However, all is not gold that glitters, and all of these shopping centers are not working out as the planners and the tenants in the shop visualized. In a large shopping center in Massachusetts we are told that only three stores in the entire group are making money. These three are the grocery store, the liquor store, and the dry-cleaning establishment.

Cosmetics and Food Brokers

At least one producer of mass-distribution cosmetic products—hair tonic, shampoo, etc.—has complete coverage of the country with food brokers who handle the sale of these products to the grocery trade. Food brokers are used by manufacturers of grocery store merchandise to a great extent because it is a relatively cheap and effective way to get wide distribution. Some food manufacturers only use them in certain areas where they do not have direct salesmen, or where it is difficult to obtain real effective distribution in any other way.

These brokers work at a rate of five per cent from the manufacturer plus a further percentage for promotion. This other percentage may vary from five per cent to upwards and is generally arrived at by agreement. In many instances it has little real relationship to the money spent by brokers, but nevertheless manufacturers who work through them do not find it burdensome.

Drug Retailer's Problem

The independent retail druggist in and around the New York area at least, has to work hard these days. He spends 14 to 16 hours or more in his store. This is because the wages for help are high. This help is unionized and the minimum wage is $125 for a 40 hour week. Naturally it is difficult to do enough business in the average neighborhood drug store to support enough clerks at this price to allow the owner to get any time off. His days off and vacations are practically non-existent.

The chain stores in the New York area also are said to be feeling the stress of these high wages. It seems that the chain drug stores are doing only 19 per cent of the business today against 25 per cent a few years back. This is thought to be largely the result of grocery store competition. However, this curtailment in the volume of the chain stores makes the high wages paid the clerks most aggravating and affects profits quite seriously.

Working with Chains

Working with chains—and for that matter with other retail outlets—sometimes can be a losing proposition even if the volume of sales of a manufacturer's products is increased. One manufaturer of mass-distributed cosmetics (hair tonic, shampoo, etc.) tells how he went along with the chain drug stores and gave them everything they asked for. These cooperative arrangements included advertising, paid-for window displays, counter displays, P.M.'s, and so forth. The manufacturer totaled up the score and found out that even though his business in the area had increased 10 per cent, it was costing him 23 per cent to get the increase.

How to get out of the arrangements was the problem which was the manufacturer's problem. Finally he was cited in a complaint by the Federal Trade Commission for not doing all these same things for all his customers on proportionately equal terms as required by the Robinson-Patman Act. This gave him his out, and in this instance he was more than pleased at the action of the Federal Trade Commission. He explained to the chains that he could no longer continue these cooperative agreements. Then he told the FTC that he canceled the arrangements and the complaint was dismissed. In this instance the FTC was a blessing in disguise even though the FTC probably did not realize it.

Alcoholism in the World

The problem of alcoholism—world-wide—has been reported upon by the World Health Organization. A report of a three-year survey conducted under the auspices of WHO—the first survey of its kind—was presented last month before the World Federation for Mental Health by Dr. Elvin M. Jellinek, formerly of Yale University, now consultant on alcoholism for WHO. The Federation represents seventy-two organizations in thirty-eight countries with a membership of more than a million.

Facts revealed by Dr. Jellinek regarding alcoholism are: There is tremendous variation from country to country. In some countries, including the United States and Sweden, alcoholism is almost a neurotic response pattern. In some other countries, a type named reactive drinkers is found who respond to some very strong social stress or injury to the psyche late in life.

In the United States there are a great many reactive drinkers among women past thirty-five years. At that age women start drinking for a number of causes such as a husband's infidelity, the death of a mother or of a child, or loss of social status. Though the fault in such cases is psychological, it is not of a neurotic nature. In Denmark quite a number of men are reactive drinkers, but alcoholism is not a real problem in that country. Among the poor in Chile, alcoholism is mainly nutritional in origin because the drinker is unable to get enough calories from his meager food ration and hence gets the calories from alcohol.

France has the largest alcohol problem in Europe, with the result that French alcoholism is now one of the conversational topics all over Europe. The problem is most acute in the rural areas of France and less acute in the cities. Whether the cause is the accessibility of wine at all times or a much deeper cultural factor is not known. There are more than a million alcoholics in France.

Of 28 million adults above 21 years in the United States, there are 4 million alcoholics, or 3.8 per 100,000 adults. Of these, alcoholics among men outnumber alcoholic women 6 to 1.

Alcoholism is now recognized as a phenomenon causing enormous interference with other health problems. Thus, 15 to 18 per cent of tuberculosis patients are alcoholics. The survey found an enormous percentage of juvenile neuroses arising out of alcoholism by parents. Loss of love and attention by alcoholic parents was one of the major contributors to juvenile neuroses.

Steroids by Fermentation

A method of producing cortisone, Compound F, and other steroid hormones, by fermentation was announced last month by a team of scientists from the Syntex Laboratories in Mexico City. Dr. B. A. Rubin, speaking for the group before the annual meeting of the Society of American Bacteriologists in San Francisco, said the new procedures, based on the use of microbes, might cut the cost of Compound F by as much as 90 per cent.

Scientists of the Upjohn Company announced a fermentation method for producing cortisone last year. However, the Syntex method, it was emphasized, can yield not only cortisone but also Compound F or hydrocortisone, various male and female sex hormones such as testosterone and estrone, as well as DOCA for treatment of Addison's disease.

As Chas. Pfizer & Co. has a working agreement with the Syntex Laboratories, and since Pfizer scientists are foremost experts on the science of production of chemicals by fermentation, it might be that production of desired steroid hormones by this new method might very shortly be in production in this country.

Miller Medicine Stipulates

Miller's Medicine Co., Nashville, Tenn., have stipulated with the F.T.C. to stop representing that Miller's Herb Extract (1) is effective in regulation of the liver, or (2) is effective in relieving or preventing neuritis, neuralgia or yellow jaundice. Further claims stopped are:

1. That the product (a) prevents constipation, (b) eliminates constipation, (c) affords permanently regular habits to the users, or (d) has any beneficial effect in constipation, except to afford relief from occasional constipation.
2. That the product (a) cleanses the system, (b) eliminates poison from the system, (c) assures good health, (d) confers vitality, (e) conditions the vital organs, or (f) prevents or cures colds.
3. That the product has a beneficial effect in cases of headaches, billiousness, lack of energy, nervousness, dizzy spells, sluggishness, bad breath, lassitude or loss of appetite except to relieve those conditions when they are due to constipation.
4. That the product is a tonic.

EWING GALLOWAY PHOTO

Fair Trade Problems

Fair Trade is in a confused condition to say the least. Not only are the decisions being handed down by various courts throughout the land at variance, but price-cutting is widespread in the sale of many items which are supposed to be sold at fair trade minimum prices.

One of the great difficulties with fair trade is the wide range of the products brought under it. Originally conceived and brought to enactment by the efforts of retail, wholesale, and manufacturing interests of the drug trade, once fair trade became the law throughout the large majority of the states, all other manner of trade-marked merchandise was brought under its protective cloak.

One of the great weaknesses of fair trade is that it has been used to attempt to control the prices of relatively high-priced jewelry, major appliances, and other items priced at many times the ordinary items sold in the drug store. Whereas the price-cutting in the drug store eliminated by fair trade amounted to just so many cents, or at the most a minor part of a dollar, the price-cuts sought to be eliminated in these other fields run as high as $100 or more. In the eyes of the average buyer, savings of this kind are not to be overlooked. Therefore consumers, who do not purchase items of this price magnitude every day, are perfectly willing to spend some time seeking out dealers who will give rather sizable discounts on items of this sort.

It is this sort of thing which can seriously undermine fair trade. It will be recalled that some time ago when General Electric sued for an injunction against Macy to prohibit price-cutting on G. E. appliances, Macy entered a defense citing the rampant price-cutting on G. E. items by discount houses in New York. And when the injunction was granted, it was granted with the proviso that G. E. make a serious attempt to clean up the price-cutting on their items by the discount houses.

When considering the unstability of fair trade it must be realized that the large department stores and other stores operating in a dignified manner, and under relatively large overhead, cannot continue to face a condition under which they are quite widely undersold. They are either going to meet price competition or they are going to discontinue handling certain lines or close out entire departments. Under these circumstances, fair trade is of questionable value, and furthermore, the entire structure of fair trade is weakened thereby.

Quite probably it is the changing distribution picture which is in the main responsible for the uncertain fair trade situation today. In the drug field the necessity

of having fair trade is not so keenly felt as it was when fair trade started. This is due to the fact that the grocery trade is now a recognized outlet for drugs and cosmetics, and manufacturers openly sell them even to the extent of working through food brokers. When fair trade was started, the manufacturers of widely distributed, commonly used, drugs and cosmetics were mortally afraid of losing the goodwill of the druggists, as they would refuse to handle their merchandise or hide it under the counter if price-cutting on it was at all widespread. Now the manufacturers of the mass-distributed drug and cosmetic items are not only openly doing business with the grocery trade and the variety stores, but also with all manner of other outlets who will handle their products.

Naturally this same set of circumstances does not apply to the manufacturers of ethical drug preparations and manufacturers of over-the-counter drug preparations which cannot be sold by anyone but a pharmacist. Neither does it apply to the manufacturers of cosmetics who seek to follow the pattern of distribution known as restricted or selective distribution.

After all, price maintenance, or fair trade is only desirable to a manufacturer when it brings him more business and greater profits than open pricing would. Favorable trade relations with distributors are a matter of good business and this is why manufacturers seek to maintain them. But if and when certain policies adopted to cement trade relations cease to pay off, they are generally abandoned. Furthermore, the relationship between the manufacturers and the distributors must be a two-way street. The distributors must prove to the manufacturers that their goodwill is worth money to them. There are doubtless some manufacturers and others who believe firmly in fair trade as best for business in this country over the years. However, there seem to be many more manufacturers who, from their actions and unguarded statements, are in favor of fair trade only so long as it makes their profits bigger and their jobs easier. Certainly fair trade is not something which involves the "American way of life," and neither does it have any basic justification in economics. Its original concept had to do with the protection of small business—namely the retail druggist—against the chain drug stores and other large retailers who used trade-marked drugs and cosmetics as bait to get customers into their stores. How much this protection amounts to today is a matter of speculation since the retail druggist has very sharply increased his proportion of prescription business due to the sharp increase in recent years in the use of pharmaceuticals, and also due to the sharply higher prices which the new pharmaceuticals bring.

The Miles Laboratories was extremely active in advocating fair trade legislation at the inception of the idea. After the first fair trade law was enacted in California, it proved ineffective because it did not control non-signers. It was the late "Hub" Beardsley, then head of Miles Laboratories, who brought to California the late Edward S. Rogers, noted trade-mark attorney, to see what could be done. In conference with interested parties at lunch in California, Mr. Rogers wrote the non-signer section (section 1½ in the California law, section 2 in other state laws) on the back of the menu. This section was adopted by the State of California and from then on the fair trade act of that state became truly operative. It was this section that caused interested parties in other states to work for enactment of similar laws in their own states and eventually to work for enactment of the Federal enabling act. However, this great contribution to the retail drug trade was just about completely forgotten by the retailers who had benefited, when, during the recent suit of the Proprietary Association to free the sale of commonly used drugs from control of the druggists, Miles representatives chose to follow the road that they believed the right one.

However, whether drug retailers realize it or not, continuation of the fair trade acts and the Federal enabling act were never of greater importance to their welfare than they are today. This is for the reason that the supermarkets are now recognized sellers of mass-distributed drugs and cosmetics. There are manufacturers in this industry who state very positively that the grocers will not cut prices on these items. The reason given is that the turnover is not at all comparable with food and other items in the stores, and that the grocers want to maintain a forty per cent profit on items which turn over so slowly. But one must remember that because these items represent such a small part of their total business, prices on them can be cut not only to attract customers to the store with no apparent loss, because this will not attract customers, but it will speed up the turnover. And once a few smart grocers start cutting prices, it will not be long before all of them follow suit. This was the way in which the grocers took over the cigarette business, and they can follow suit in this industry.

It would seem that the court decisions in fair trade cases throughout this country reflect the uncertainty which exists regarding fair trade as a basic policy for this country to follow. And this uncertainty does not vary according to different conditions existing in different areas or different states, but it exists right in the same state as evidenced by conflicting decisions handed down by different judges in the courts of the State of New Jersey.

On July 7, Superior Court Judge Walter J. Freund, in Newark, N. J., held that the McGuire Act, as Federal statute, was "ineffective" as a means of compelling non-signatory retailers from complying with the New Jersey fair trade act. In this case, the judge refused to issue to the Lionel Corporation, makers of electric trains in Irvington, N. J., an injunction against Gray-Robinson Stores of California, operator of S. Klein department store chain. Said Judge Freund:

"I am led to the conclusion that a court of equity may not issue an injunction to compel a non-assenting retailer to a price-fixing schedule established by a

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Factory Inspection Restored

Factory inspection has finally been reinstated in the Federal Food, Drug, and Cosmetic Act. It will be recalled that the U. S. Supreme Court invalidated this power in the Cardiff decision because of the contradiction in the original act. Enactment of an amendment to restore this authority was part of President Eisenhower's State of the Union message, but due to the controversy which arose over the provisions of such an amendment, Congress did not vote approval until it was just about to adjourn in the closing days of July.

The controversy arose over the contention by the affected industries that the Food and Drug Administration had claimed under the old amendment that inspection included formula files, manufacturing processes, complaint files, ability of personnel, and similar things. And while the FDA was perfectly willing to have the amendment follow the wording of the old law so far as things to be inspected were concerned, the industry wanted assurances that the new amendment did not include the additional areas of inspection which the FDA claimed under the original act.

For this reason, the committee reports of the House of Representatives and of the Senate and the debate on the floors of these bodies were of prime importance to show the limitations which Congress was placing on the authority which it was granting under the amendment. Prior to the reporting of the bill to the House and Senate, successful efforts were made to have, through correspondence, the Secretary of Health, Education and Welfare express approval of these limitations in inspection powers to be granted under the proposed amendment.

A last-minute attempt on the part of the FDA to have an amendment added to the proposed bill which

amendment would permit inspectors of the FDA to go through the prescription files of drug stores. This amendment was added to the bill by the Senate after approval by the House. However, when the House refused to accept this amendment, the Senate passed the bill in the form in which it had been passed by the House.

Food and Drug Commissioner Charles W. Crawford expressed great disappointment over the defeat of this amendment to the amendment, saying that in his opinion the power given through the Durham-Humphrey amendment to curb the illicit sale of sleeping pills would not be enforceable under the new inspection amendment. Said Commissioner Crawford:

"True, our inspectors can still go in as private buyers, and get nonrefillable prescriptions refilled, or buy without prescription, and thereby establish a clear violation of the law and bring suit. But we have been going further to show a pattern of broad and willful violation before taking a case to the courts.

"If a check of prescriptions filed for six months, together with repeat files, shows 5,000 barbiturate pills prescribed and six months inventory shows 25,000 such pills sold, the other 20,000 must have been dispensed illegally. This is the kind of cases we have been bringing right along.

"Under a court ruling, as the Food, Drug, and Cosmetic Act was interpreted for fifteen years prior to the Supreme Court ruling in the Cardiff case, we had the right of prescription and records inspection. Accordingly no inspection authority was written into the Durham-Humphrey law, which was an amendment to the Food, Drug, and Cosmetic Act. I am sure, however, that any court interpreting the new inspection legislation would deny the Food and Drug Administration prescription inspection in the light of the debate on the House floor when the bill was passed."

The limitations placed on inspection authority granted under the new amendment are best spelled out in the report of the House Committee. The report of the Senate Committee is rather confusing, and therefore the House report is the one that should be relied on in any future legislation involving the scope of inspection authority under this amendment.

Under the heading, Requirements That Inspections Shall Be Reasonable, the House report says:

"The effect of the bill is to remedy the defect which the Cardiff case revealed in the 1938 provision for factory inspection. The bill will remove any question as to the right to refuse entry for a reasonable inspection as provided for in section 704. It is intended to provide compulsory, *but limited*, inspection authority. This, therefore, creates a new situation with respect to inspection, and the committee is of the opinion that in such a situation it is imperative *to limit* the power and scope of inspection to be granted to the Food and Drug Administration.

"Several witnesses urged that the committee adopt amendments which would spell out in detail specific limitations. The committee concluded that the power of inspection should be limited and *circumscribed* without spelling out in detail specific limitations; that terminology, although general, could nevertheless be restricted by the amendment of the act to impose and emphasize a requirement for reasonable interpretation and application.

"The requirement for the inspection 'within reasonable limits and in a reasonable manner' has been inserted in the bill for the purpose of *confining the scope* of inspection to 'factory warehouse, establishment, or vehicle, and all pertinent equipment, finished and unfinished materials, containers and labeling therein.' "

With regard to search warrant procedure the report states:

"The inspection powers which were exercised by the Food and Drug Administration prior to the decision in the Cardiff case, and which are provided for by this legislation, are a necessary part of a regulatory scheme intended to protect the health and lives of the public by preventing the channels of interstate commerce from being used for the distribution of adulterated and misbranded food, drugs, devices, and cosmetics. The inspections are normally a matter of routine checking, primarily as to sanitary and related conditions, and are not necessarily based on any prior suspicion or determination that any law has been or is being violated." And after reviewing inspection precedents in other statutes the Report continues: "It is illogical to contend that the power to inspect a factory or other establishment to avoid dangers to health is less extensive than the power to inspect the factory's books to discover violations of economic regulations. To argue that Congress is without power under the Constitution to provide for reasonable inspections necessary to public protection in the use of food and medicines is to contend that Congress is largely powerless to prevent or control interstate commerce in adulterated or misbranded merchandise, and that the majority of the statutes listed in appendix A are unconstitutional. The Committee does not accept these contentions."

The confusion in the Senate over just what the amendment means in regard to the scope of inspection authority arises from the fact that the Senate committee report included statements at almost complete variance with the House report. However, the debate on the floor of the Senate when the bill was being considered for passage appears to nullify or dilute these parts of the committee report. So we find that the record of the Senate certainly is not anything upon which a court could properly rely to determine the intent of Congress in enacting this legislation.

The amendment as it was enacted follows:

Sec. 704. (a) For purposes of enforcement of this Act, officers or employees duly designated by the Secretary, upon presenting appropriate credentials and a written notice to the owner, operator, or agent in charge, are authorized (1) to enter, at reasonable times, any

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Anti-Enzymes

by Thomas Cifelli, Jr.

GAYLOR, CIFELLI & JURICK
NEWARK, NEW JERSEY]

DEVANEY PHOTO

It looks as if the tooth paste people are coming up with a new "discovery" at the rate of almost once a year. This phase started a few years ago with the ammoniated preparations. Then chlorophyll became the magic word. Now, if one is to believe the recent publicity, the big boon to our teeth is a class of chemicals called anti-enzymes.

Already the ad people have taken over and articles on the subject have appeared or are scheduled to appear in several national popular publications. A battle in the market-place, if not in the courts, seems to be developing among the firms who are naturally anxious to get a start on their competitors. Lambert seems to be the first company in the market. Colgate and Block Drug have also been mentioned as ready to get into this business.

With the situation in such a condition it was only natural to wonder whether there was any patent picture of interest. Diligent search failed to unearth a single U. S. patent covering the use of these anti-enzyme chemicals (sarcosides) in tooth pastes. Further search however, revealed that Colgate has obtained two patents in South Africa. The first one, No. 16272, is the basic one and the second patent, No. 17041 covers the use of certain stabilizers for dental creams containing the sarcosides. This latter fact would indicate to the unimaginative patent attorney that perhaps there are certain "bugs" that have already been encountered in the use of the anti-enzymes.

Since the subject is of such present importance and since S. African patents are not published, it was thought that the readers of this Journal would like to have a look—see for themselves at the patents. Accordingly, the entire text of No. 16272 and an abstract of No. 17041 are offered here.

So. African Patent 16272
Oral Preparations
Problem—Generally Stated

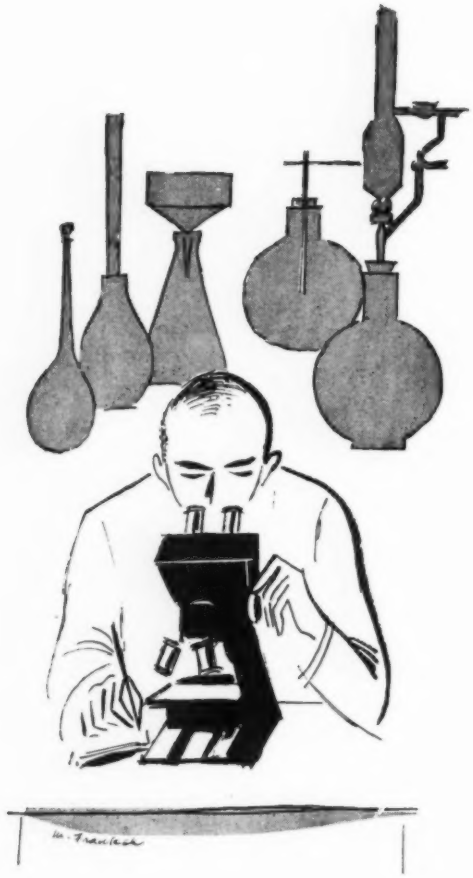
The present invention relates to new and improved oral preparations and, preferably to dentifrice preparations for the care and hygiene of the oral cavity.

It is recognized that the problem of reducing the formation of acids in the oral cavity resulting from the fermentation of suitable carbohydrates by certain bacteria which are normally present in the oral cavity or saliva remains a challenging one to the art. It is necessary for proper action that any effective substance to reduce such acid formation have a prolonged effect, such that its introduction into the oral cavity once or twice a day will be sufficient to inhibit the carbohydrate degradation process during the day, if not longer. In general, the substances hitherto proposed have been uniformly unsuccessful for any prolonged effect since their activity, if any, is generally persistent for only a short period of time of the order of minutes. Thus, in addition to the need for the discovery of an effective agent, a primary consideration is that some practicable means characteristic of such agent must be available whereby the inhibitor can be maintained at an effective concentration in the mouth at all times.

Solution—Generally Stated

Broadly, the present invention relates to an oral preparation having as the active ingredient a higher aliphatic acyl amide of an amino carboxylic compound in an amount up to about five per cent by weight, said active ingredient being essentially characterized by its ability to inhibit acid production from fermentable carbohydrates by bacteria in the oral cavity and by its adsorption upon proteinaceous material. In a preferred embodiment, the invention further relates to a dental cream comprising a suspension of an essentially water-insoluble polishing agent in a gel, said cream containing up to five per cent by weight of an amide compound having the formula:

$$\begin{array}{l} \text{R–CO–N–CH}_2\text{–COOX} \\ \quad\quad\quad\



Pharmaceutical Classifications

In classifying manufacturers in the drug division of this industry the old classifications, proprietary and ethical, are far less sharp than they once were. Proprietary manufacturers years ago were those who sold preparations which were advertised to the public and sold freely over-the-counter. Today this classification still refers to this type of manufacturer, but the so-called ethical manufacturers in many instances, are not so far away from the proprietary classification. The term "ethical" when applied to a drug manufacturer has long meant a manufacturer who promotes his goods solely through the medical and other interested professions. In years gone by, these manufacturers never—with one outstanding exception—advertised their products to the public. The outstanding exception was E. R. Squibb & Sons. This company advertised household products, including tooth paste and shaving cream, direct to the public, and the company also advertised institutionally.

Since that time, several of our outstanding pharmaceutical manufacturers have advertised institutionally. In addition, some of them have cited their work in the development of some of the new, outstanding pharmaceutical discoveries. Furthermore, one or two of them have, in fact, advertised a recent product discovery restricted to prescription sale. In these instances, the manufacturers appear to be promoting their products by attempting to create the need for these products in the minds of the public, so that when the average person goes to the doctor he will ask the doctor to prescribe one of these drugs if this person has one of the conditions which the advertisements told him the products were good for.

In addition to this, the so-called ethical manufacturers are doing an increasing amount of business in over-the-counter products. And even though these products are not advertised directly to the public, the names of many of these companies are being steadily impressed upon the public mind through their institutional advertising which is now becoming quite widespread.

So far as the term "proprietary" itself is concerned, the ethical branch of the drug manufacturing industry is replete with proprietary preparations. This is because the ethical manufacturers now use trade-marks for all the products they can, even to the point of utterly confusing the doctor and others who are concerned with the distribution and use of their products. Then further a large number of the products of ethical manufacturers introduced in recent years are under patent, and this definitely classifies them with the proprietary manufacturers who were formerly known as patent medicine manufacturers.

But a basic change has taken place in the ethical or pharmaceutical drug manufacturing industry itself. Years ago these houses were, almost exclusively,

formulators. That is, they bought their raw materials from chemical manufacturers, botanical drug houses, and other suppliers, and then they formulated their products. Their manufacturing operations, for the most part, were limited to the making of pills and tablets, capsulating, extraction of botanical drugs, manufacture of simple things such as milk of magnesia, ointments, and so forth. In other words, these manufacturers were largely houses who prepared known drugs in what are called "dosage forms." New discoveries were few and far between, so the main function of these manufacturers was to supply the pharmacist and the doctor with preparations which were formulated very carefully in large volume, thus cutting down the time which the pharmacist spent in this sort of work.

But today, the picture is quite different. Due to the great acceleration in the tempo of pharmaceutical discoveries, the outstanding pharmaceutical manufacturers have become basic producers of the new products which they have discovered or which they have decided they should be marketing. Thus these pharmaceutical houses are, in fact, chemical manufacturers, in many cases producing by various means, some of the most complicated organic chemicals that have ever been produced. Some years back, a pharmaceutical manufacturer who discovered some new product of this sort, contracted with a chemical manufacturer to make the desired chemical just for him. This was sort of a private brand business in chemicals which is still carried on for manufacturers in other industries, if not very much any more in the drug business.

This has meant the erection of huge chemical manufacturing plants by the pharmaceutical manufacturers, and the engagement of personnel skilled in chemical plant operations to run them. It has also been the cause of companies who were large suppliers of chemicals to the drug and pharmaceutical manufacturers, becoming marketers of finished drugs and pharmaceuticals. Thus as the pharmaceutical manufacturers have, to a marked degree, backed into the chemical manufacturing business, the medicinal chemical manufacturers have, in several instances, moved forward into the marketing of pharmaceutical preparations. Furthermore, the purchase of pharmaceutical manufacturing enterprises by chemical manufacturers as a means of obtaining quick and recognized distribution for their pharmaceutical chemicals has taken place in several instances, and rumors of more such mergers are always being heard.

Not that this entry into the chemical manufacturing business has proved a profitable venture in all instances. Once a pharmaceutical manufacturer decides to engage in the manufacture of one of the newer pharmaceutical chemicals which is being marketed by several houses, he engages in competition in the production of the product in addition to being in competition in the marketing of it. This was very vividly depicted in the penicillin situation when the enormous plants of several manufacturers became obsolete within a relatively short period of time due to improvements in production methods which cut the cost of penicillin to such a point that the drug could be sold at less than the cost of production in the older plants. Thus several drug or pharmaceutical manufacturers have been badly pinched in this squeeze. And even though a pharmaceutical manufacturer who markets his own penicillin direct has an advantage over a bulk seller of penicillin in the price he gets for his goods, the differential has been great enough to cause some of these pharmaceutical manufacturers to close down their plants and buy from others. In this instance, and probably others that will arise in the future, the pharmaceutical manufacturers would have been far better off if they had left the manufacture of chemicals to the chemical manufacturers rather than enter the field themselves. After all, if the people were buying in bulk, they would have been able to buy at the best price and therefore they would have been in a competitive position on their finished product at all times.

This same situation will doubtless arise in other pharmaceutical chemicals recently discovered. Right now Merck & Co. are said to be in a bulk position on cortisone. Therefore, any pharmaceutical manufacturing house can now obtain cortisone for marketing under his own label. Furthermore, the larger pharmaceutical manufacturers have now organized bulk departments for the sale of all these sort of products to others who desire to use them.

This brings us to the point of classifying the pharmaceutical manufacturers into two classifications. First we have the manufacturers who are heavily engaged in research devoted to the discovery of new therapeutic agents, and also engaged in research devoted to the production of these new agents on a large scale. These houses are the leaders in the industry. They are the ones who are giving the industry its well deserved reputation that it enjoys today, and they are the ones who are mainly responsible for its phenomenal growth of recent years.

The other classification in the pharmaceutical manufacturing industry are known as dosage form houses. These are the pharmaceutical manufacturers who buy practically all of their raw materials from others and market finished products for use largely by doctors and by patients for whom the products are prescribed. By and large, these houses conduct comparatively little research. They keep their ear to the ground for trends in medicine and they make many new combinations of known drugs in an effort to produce preparations which produce more satisfactory results than the products marketed by others. Among this type of house are a large number of those who immediately bring out a product of their own when another manufacturer has shown them the way with a successful product. In the main, their products are of types which can be bought from other manufacturers, but in some instances they reach the point of pharmaceutical elegance at which some of their products are most desirable.

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COURTESY HARRIET HUBBARD AYER

A Review Of Permanent Waving

By William R. Keithler
LUCKY HEART LABORATORIES, INC.

Historically speaking, the art of hair waving is anything but recent. As far back as 1866 a United States Patent (No. 54115) which has since expired, was issued to one Richard Clark. Clark's invention, called Hair Curling Fluid, would hardly have made the stock market boom to new heights, but I imagine there were a few takers. His invention consisted of mixing four ounces of water, two ounces of alcohol, and one ounce of boxwood extract, then boiling the whole mess down to four ounces.

Since this time, dozens of patents have been issued for permanent hair waving, or curling fluids. These ranged anywhere from extract of Japan tea, to sulfonated castor oils. It was not until Dr. Everett G. McDonough's recent basic cold wave invention, that the market became flooded with the new home permanent wave kits.

The theory of the invention, probably, is as follows: The thioglycolate, or reducing solution, converts the disulfide linkages of the hair into sulphydryl groups; and the neutralizing solution oxidizes them back to their original composition.

Any one of many oxidizing agents can be and are presently being used. Hydrogen peroxide, for instance, is one, but proper balance must be maintained in order to avoid the bleaching effect that hydrogen peroxide has upon the hair. A suitable oxidizing formulation is as follows:

Solution Hydrogen Peroxide, 6 per cent	**75 cc.**
Tartaric Acid	**45 gms.**
Distilled Water	**150 cc.**

The above solution can be used exactly as is. However several manufacturers put out their waving solutions in conjunction with a solid neutralizing agent, such as potassium bromate or potassium iodate, with instructions for dilution and use. The quantity used should be one-fourth ounce, dissolved in sixteen ounces of water. Certain patent rights govern the use of alkali and alkaline earth bromates and iodates as oxydizing agents in preparations of this type.

As I stated in my first article concerning permanent hair waving, careful control from raw materials to finished product is absolutely essential to guarantee an effective preparation. There is no standard set of controls that is applicable to all manufacturers. Each individual plant must establish its own set of rigid controls, based upon the method of processing and the equipment used. There is no way that I know of to avoid a thioglycolate determination, if you wish to be sure of the strength of your product.

There is no standard formula or process for the preparation of permanent wave solutions. The solutions run in strength from three per cent to five per cent for home use; and from five per cent to eight per

cent for professional use as illustrated by the following formulations:

Thioglycollic Acid, 75 per cent	**12 gms.**
Ammonium Hydrogen, 28 per cent	**12 cc.**
Wetting Agent	**.2 gm.**
Distilled Water	**200 cc.**

or,

Ammonium Thioglycolate, 53.6 per cent	**102 cc.**
Ammonium Hydroxide, 28 per cent	**10 cc.**
Cloud	**3 cc.**
Wetting Agent	**1 cc.**
Perfume	**2 cc.**

Each of the above formulations have a pH of about 9.3, and are suitable for home use. Below, is a formulation which is suitable for beauty shop or professional use.

Thioglycollic Acid, 75 per cent	**18.6 gms.**
Ammonium Hydroxide, 28 per cent	**18 cc.**
Wetting Agent	**.2 gm.**
Distilled Water	**200 cc.**

Due to the increased strength of the latter formulation, the product when in use, is left on the hair for a shorter duration of time.

Most of the home waving kits now supplied on the market contain an ingredient designed to cloud the finished product and give it a lotion-like appearance. Some manufacturers use a resin dispersion to achieve this effect, while others actually make an emulsified solution.

The manufacture of emulsified waving lotions entails considerably more control of the product as well as extra work. Due to the possible reaction between the emulsifying agents and the buffered waving lotion, considerable care should be employed in choosing any formulation.

In most cases of an emulsified lotion, it is best to use cetyl alcohol in combination with one of the polyethylene glycols, distilled water and an emulsifying agent, usually sodium alkyl sulfate. The whole must be cooled down to room temperature before adding the thioglycollic acid and buffering with ammonia. The thioglycollic acid must never be heated. The amounts of cetyl alcohol used vary, according to the preference of the manufacturer. From 0.2 per cent to 0.6 per cent is a common factor.

It has been said that resin dispersions incorporated into a wave lotion leaves a film or coating upon the hair, which is extremely difficult to rinse out. Hence, the switch to emulsified lotion.

I cannot over-emphasize the necessity of using materials free from iron and the contamination of the finished product by iron. In a case of contamination, there is probably a reaction of the iron on thioglycollic acid, producing the ferrous complex. This is then oxidized by air or oxygen to form the red color characteristic of the ferric complex. The ferric complex is then autocatalytically altered to the divalent state while, at the same time, the thiol is being oxidized to the disulfide. This produces ferrous iron and upon contact with more acid and oxygen, the complete cycle is repeated.

In direct contrast to the permanent wave lotions, there has recently been put upon the market a product designed to straighten curly hair rather than to curl straight hair. The basic principle of performance is the same as its sister product, namely, the reduction from disulfide to sulphydryl, and the subsequent oxidation back to disulfide.

As yet, no statistics exist concerning the consumer acceptance of a permanent hair straightener; or at least, these statistics are for the most part, unavailable. It is my firm opinion, however, that since the colored population spend vast sums of money each year on hair pomades and the like, their purpose being to give the hair a longer straighter appearance, a product of this type might do very well with the proper advertising and sales promotion behind it.

The formulation of a permanent wave lotion is child's play, compared to the formulation of a permanent hair straightener. The main problem to overcome is this: Due to the fact that the majority of the consumers of this product will be colored, and, since their hair is very coarse and tightly curled, it is necessary that the straightener be of such consistency as to hold the hair straight while the product is doing its job. In order to do this, it must be a heavy, sticky, or tacky cream and at the same time it must be very easy to rinse from the hair.

One such product now on the market is just this type of cream. The product is an emulsified cream and is very heavy and tacky. It is applied, generously, to the hair, after which the hair is combed for two minutes, every fifteen minutes, each time in the opposite direction. The cream is left on the hair for approximately one to two hours. Then the hair is rinsed with water, neutralized with an oxidizing agent and once more rinsed with water. I have heard that a permanent hair straightener is currently being manufactured in the form of a cream shampoo. I have never seen this product and I have no idea whether this product in a shampoo base would work, or not. The idea, however, is an excellent one and anyone actually interested in marketing a hair straightener, might do well to look into this angle.

The formulation of a hair straightener, putting it rather mildly, is difficult. A suitable base must be found that will not react with the thioglycollic acid in the relatively high alkaline medium necessary for the straightener to function properly. The finished product also, as I said before, must have the unique property of being easy to remove from the hair, with warm tap water. This latter property is the one which will either

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Drugs in the Satellite Countries*

The entire East European wing of the Soviet empire is today suffering from drug shortages. Before World War II the smaller or less industrialized states (Albania, the Baltics, Bulgaria, Romania) produced few drugs on their own, relying heavily on foreign imports to satisfy their limited needs. With Soviet absorption, and Moscow's blockade of Western trade after the summer of 1948, this important source was inadequately replaced by Russian imports, pathetically supplemented by the confiscation of such drugs as happened to turn up in "gift packages" from the free world.

In the more industrialized nations (especially Czechoslovakia), where there had been considerable pre-war domestic production as well as thriving trade with the West, Communist nationalization of the drugs industry seriously affected output. Notwithstanding vigorous regime efforts to bring production back to pre-war par, the loss of Western raw materials combined with technical difficulties has blocked real advance.

Throughout the area, and despite rigidly State-controlled distribution of medicaments, shortages in supply have nourished a flourishing black market dealing particularly in drugs smuggled or gift-mailed from the West.

Poland

Up to the beginning of the Second World War, the Polish pharmaceutical market was supplied by home industries and the unrestricted flow of foreign products. The Klawe and Motor industries, with head offices in

*From "News from Behind the Iron Curtain," August, 1953.

Warsaw, were the most important companies producing medical supplies. Foreign firms such as Bayer (German), Roche and Sandoz (Swiss) were well represented, as were various French manufacturers. Medicines were distributed and prepared in privately-owned pharmacies.

After the war the entire pharmaceutical industry was nationalized, including foreign companies**, under the name of the "Polish Pharmaceutical Industry" and each plant was assigned a serial number. Management was placed in the hands of the so-called "Centrofarm," previously known as "Centrosan."

Newly instituted economy measures limited experimental research; costly methods of production and scientific contracts with foreign countries were stopped; and currency restrictions prevented the replenishment of worn out installations and the importation of necessary raw materials.*** A physician who escaped to the West near the end of 1951 described the effect of these measures:

"The government requires the strict application of all money-saving methods without consideration of human health or life. Part of this economy is based upon the false evaluation of medicaments purchased by the patient. Doctors soon began to realize that medicines of Polish make, prescribed in similar doses, are less effective than those manufactured abroad.

"Some medicines are imported from the Soviet Union, but they have proved to be not only ineffective but so impure that their effect is rather toxic and often very dangerous. The importation of caffeine was discontinued because it often produces symptoms of poisoning, grave diseases, and leaves a white, insoluble residue in sealed ampoules and syringes.

"In spite of all the rules governing asepsis, Polish-made specifics often produce supperation with complications of the ersipelas type. Similar effects result from the use of Polish-made camphor. In the case of narcotics, Polish physicians are afraid to inject morphine manufactured in the USSR because it often brings about symptoms of depressive respiration. When using penicillin, doctors are advised by authorities to give dosages which are only 80 per cent as strong as those manufactured abroad (Danish, Belgian, American or English). In reality, their strength is even lower."

Production

Data concerning the production of medical supplies is very fragmentary. However, during the later part of 1952, *Trybuna Ludu* (Warsaw), December 9 boasted:

"Production has increased manifoldly due to the rapid development of pharmaceutical establishments. We now produce about 700 pharmaceutical preparations. Several new specifics have been fabricated such as penicillin, ACTH [adreno-cortico-tropic hormone], chloromycetin, anti-tubercular remedies such as PAS, hydrazid, etc., as well as synthetic hormones, sulfonamides, aminoacids and so on.

"During recent years, the country's raw material base has been considerably developed and the substitution of materials of foreign origin by those produced in Poland has been carried out. At present, about 70 per cent of total pharmaceutical output consists of basic materials and products needed in the preparation of medicines. These achievements enable us to decrease the import of pharmaceutical products. Planned import . . . for 1953 represents only a fifth of that for 1951."

The most important manufacturing plants are located as follows:

1—*Trachomin*, near Warsaw. According to *Trybuna Ludu* (Warsaw), March 9, 1952, penicillin is the main product manufactured. Some barbiturates such as Veronal, Dial, Evipan, Luminal, ACTH etc. are also produced.

2—*Starogard*, Province of Gdansk. Here sulphziol (an antibiotic used against infection) is produced. Bromural (a sleeping drug used to combat neurasthenia) has lately been added. Other drugs manufactured are: Luminal, used against insomnia and epilepsy; Evipan, used in surgical narcosis; polopirin rubrosil and sulphamid, used in treating diseases of the respiratory tissues.

3—*Jeienia Gora*, Province of Wroclaw. Histidyn (used in treating stomach and intestinal ulcers), Luminal, crystalline penicillin, and a form of penicillin called "procaine" are the main products. Production of liver extract was begun in 1951. The extract is prepared for use in injections used to cure anemia.

4—*Zgierz*, near Lodz. This establishment produces great quantities of the anti-tuberculosis specific, PAS.

5—*Poznan*. Center of Vitamin A, B, and C production.

6—*Krakow*. *Kurier Codzienny* (Warsaw), July 17, 1952, stated that Chloromycetin (used in treating typhoid fever), and specifics used to cure diseases of the digestive track, are produced in large quantities.

7—*Wroclaw*. Here great quantities of Vitamin B_{12}, used to combat anemia, are manufactured.

Other large pharmaceutical plants are located in Warsaw, Walbrzych (Province of Wroclaw), Wroclaw, Gliwice (near Katowice), and Sopoty (near Gdansk), where cod-liver oil is produced.

Distribution

The official pharmaceutical directory for 1953 contains 1,397 entries—"at the disposition of physicians for prescriptions destined for insured patients"—according to *Express Wieczorny* (Warsaw), January 7. However, far fewer than that number are available. Drugs such as Chloromycetin are not available in drug stores and lately it has been impossible to buy them on the black market. Aureomycin is also scarce. Only in exceptional cases is it possible to get hold of and then at a cost of 1,200 *zlotys* for 250 grams (about 33 dollars

(*Continued on page 400*)

**The nationalization program was carried out in so questionable a manner that such firms as Roche filed suit against the Polish government in the International Court of Justice.

***A small amount of import is still carried on with the West, principally France.

Solidified Cosmetics

by Harry Hilfer

The great popularity enjoyed by the Stick Colognes has caused many of the cosmetic houses to investigate methods for introducing this same form to other types of cosmetic preparations. The popularity enjoyed by the stick forms is due primarily to the ease of application of such a medium, since the film could be applied to the exact area desired without any of the preparation being wasted on the hands. The well-known lipstick is the best example of a cosmetic form which has retained its popularity for perhaps fifty years, and no attempt at introduction of lip coloring in any other form has been able to survive nearly this length of time.

There have been, however, other preparations also presented in stick form whose popularity has not been nearly as great. Shaving soaps, for example, enjoyed some popularity but are now only curiosities, since the overwhelming demand was for the cream packaged in a tube. The stick would appear to be desirable therefore in preparations where the amount used is relatively small and when there is no previous treatment necessary such as saturation with a wet shaving brush. Prepara-

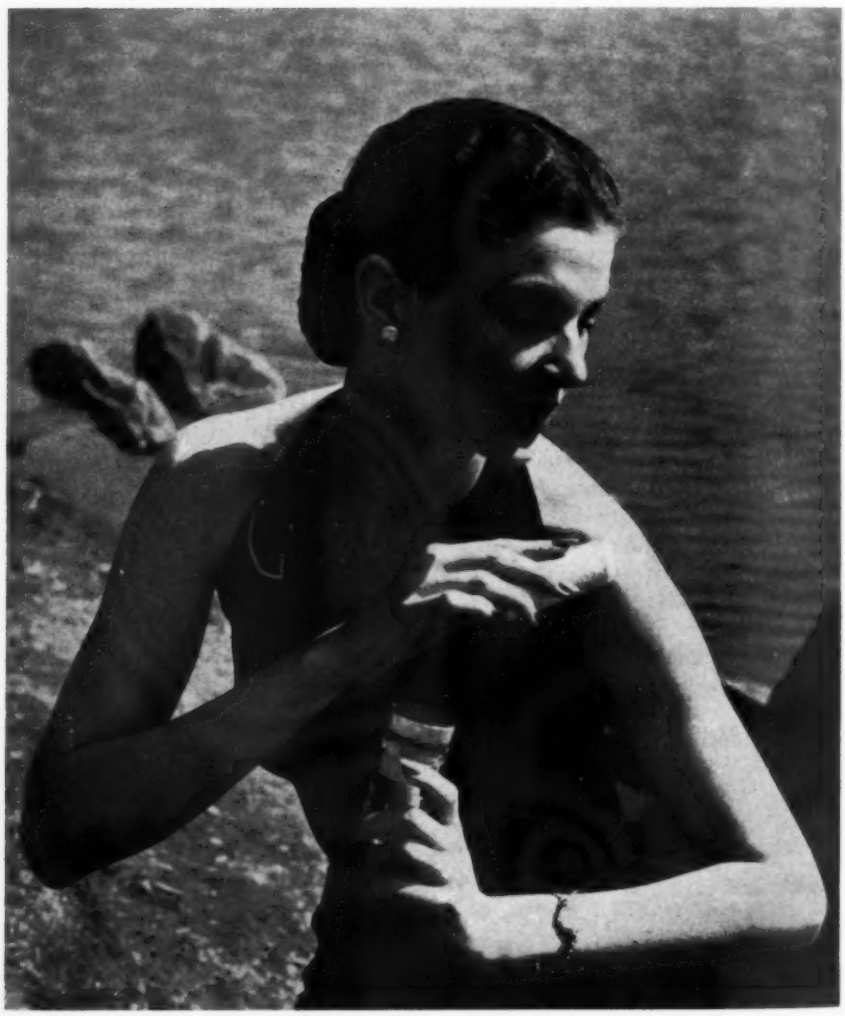


PHOTO COURTESY HELENA RUBINSTEIN

tions which would fit into this category would therefore include sunburn preparations, hand preparations, and deodorant and anti-perspirant preparations, among others. Their methods of preparation and formulations must necessarily depend on the nature of the active materials present. These will be discussed.

The best known of the stick preparations aside from the lipstick is probably the stick cologne. This is essentially a solution of essential oils in alcohol gellated by the introduction of a sodium soap—usually sodium stearate. After application, therefore, the film, following evaporation of the alcohol, consists of the soap and essential oils. Two of the things wrong with such a preparation from a strictly technical standpoint are the presence of the soap and the alcohol. Since the stick of necessity must be packaged in a wide-mounted container, the conditions present for undesired evaporation in the container are vastly increased (as compared to a liquid cologne or toilet water) and unless the consumer is extremely careful to seal the container against possible evaporation loss after each use, there will always be a possibility of dissatisfaction because of shrinkage due to evaporation.

The continued contact with the skin of a soap, even if it is as mild a soap as sodium stearate, introduces an alkaline factor which is not desirable. It is true that most hand creams contain some soap but the amount present and in conjunction with a tremendous excess of free stearic acid reduces the pH of the film to a point where excess alkalinity is no longer too much of a factor. The same, however, cannot be said of the soap present in the stick colognes where the evaporated film is essentially a soap film. Contrary to the strictly technical reasons given, however, the incidence of reported irritations from stick colognes appears to be no greater than from other products now accepted as essentially non-irritating which would indicate that the use of sodium stearate is not as bad as one would think.

Elimination of the alcohol and substitution with a non-volatile solvent would eliminate the desirable cooling effect due to the evaporation of alcohol after application to the skin. The greater the proportion of non-volatile material in the film, the greater would be the chances of the film being thought of as undesirably greasy, and I am of the opinion that the undesirable features present in the stick cologne will be overlooked because of their contributions to the desired qualifications of the product.

Many of the deodorant sticks on the market are formulated exactly as are the stick colognes, with the inclusion of a bacteriostatic agency which prevents the bacteria in the field of application from causing the odoriferous degeneration products of perspiration from being formed. Formulation of a stick antiperspirant in which aluminum salts are present as active agencies naturally must follow another course because of the precipitation and inactivation of the aluminum ion in the presence of soap. One such product has recently appeared on the market where the aluminum salt is incorporated in a completely non-volatile and non-aqueous base. Its reception should be interesting. I have not examined this product and therefore am by no means criticizing it beyond saying that I would believe a better approach would be through the incorporation of some water or other volatile solvent to minimize the danger of "greasiness." However, this factor may have been eliminated by other means. Certainly if it has it should be an excellent preparation if all the other factors present in an emulsion containing water and aluminum salts are incorporated. It should be possible to formulate such a product by the judicious use of non-volatile substances such as many of the polyglycols, which are capable of dissolving aluminum salts in conjunction with waxes with which they are compatible, and the presence of surface active agents which would cause perspiration formed to be incorporated in the film and allowing the aluminum salts to exert their effects on the tissues.

Sun tan preparations and insect repellent preparations may easily be prepared by using the soap and alcohol procedure. Certainly as far as the sun screen is concerned, where the needed concentration is relatively small such a product would be easily applied at the beach without the resultant formation of a greasy film. It would still suffer, however, from the same disadvantages as the stick cologne—or even more so since its use at a beach would increase the difficulty of properly sealing against evaporation after use. This would be all the more true because applications should be made after exposure to the water where the previous application will have washed off. For this reason it may be better to use a non-volatile medium for the stick formulations. Here, the use of many of the glycol derivatives would make an excellent base—readily jelled with sodium stearate. Certain of the insectifuges could also be incorporated in such a formula to make a product which would have the combined insect repellent and sun screen qualifications where both are usually needed at once. The fact that the "greasiness" would be present is not as important in my opinion as it would be in products which are not washed off before dressing. If an insect repellent is to be incorporated, the effective concentration will necessitate a "greasy" film under any circumstances.

There have appeared on the market sticks for use as hand creams as well. Those that I have examined contained too large a concentration of soaps to really have the product behave as a hand cream film should. I believe it is possible however to make such a preparation, but I do not think that it will be as readily salable as are the other types mentioned—if for no other reason than the woman's own desire to use the cream or lotion in conjunction with a gentle massage so that the palms of her hands may also benefit from the film applied to the backs.

Stick preparations seem to have established a place for themselves on the cosmetic shelves, but not in all categories. They seem to fit into some applications very nicely, but I do not think that all cosmetics of the future will be acceptable in this form.

Sources of Drug Market Data

by Walter A. Southern

LIBRARIAN, ABBOTT LABORATORIES,
NORTH CHICAGO, ILLINOIS

Statistics are important in the pharmaceutical industry. They form the basis for scientific research decisions, for medical research decisions, and for business decisions. As the pharmaceutical industry has become more complex, facts and statistical data likewise have become more useful. How quickly and efficiently the library is able to supply desired statistics is an excellent criteria of the quality of service offered by the industrial pharmaceutical library.

How many appendectomies were performed in the United States in 1952? What are the world-wide production figures on ergot, and which countries are the major growers? How many people will be over 65 in 1975? What is the incidence of amebiasis in the various countries of the world? What percentage of the United States production of penicillin in 1952 was exported to foreign countries? These are typical of the requests for statistical data that come into the industrial pharmaceutical library. Most frequently the answers to these requests are to be found in the standard statistical reference sources. Many times, however, these sources are not helpful, and it may be a reference in a textbook, a newspaper article, a printed speech, or perhaps an obscure leaflet issued by an advertising agency which has the answer. The librarian must be alert to these unusual sources, and he must carefully screen and index significant data contained in these sources.

This paper is concerned with the major sources of economic and market data as related to the pharmaceutical industry. The United States government is the largest supplier of statistics on the pharmaceutical industry, but trade associations, trade journals, pharmaceutical companies, private research organizations, universities and state governments also are important sources of statistical data.

Requests for current pharmaceutical economic and market data generally fall into one of the following broad groups: production, consumption, foreign trade, new pharmaceutical products, prescriptions, disease incidence, mortality statistics, and financial and operating data on pharmaceutical industry.

Since it is impossible to discuss all the major sources of information in these fields, I shall mention two or three important sources in each category. A more extensive annotated list of sources has been compiled and is appended to this paper.

Production Statistics

Production statistics may be requested for individual chemicals or pharmaceutical preparations, for the total drug industry, or for the total United States production. Two key guides for production statistics are the U. S. Tariff Commission's annual report, *Synthetic Organic Chemicals, United States Production and Sales*, and the

*Delivered before Division of Chemical Literature, American Chemical Society, Chicago, Illinois, September 10, 1953.

Census of Manufactures. The former publication gives production figures in pounds and quantity, value, and unit value sales statistics for synthetic organic chemicals and the raw materials from which they are made. Data for the report is supplied annually by more than 560 producing companies. The *Census of Manufactures* gives dollar value of shipments in finely divided subdivisions for biological products, inorganic and organic medicinal chemicals, and pharmaceutical preparations.

Consumption Statistics

Consumption statistics for pharmaceutical products may be wanted for individual products, such as aspirin sales in 1952, or for the value of total drug products sold in a particular year. *Drug Topics*, one of the leading statistical reporting trade publications in the industry, annually reports on drug sales and publishes a sales forecast as well. The report on drug store sales lists such items as vitamins, antihistamines, and eye lotions. The Retail Trade section of the *U. S. Census of Business* gives prescription, drug, and farm animal remedy statistics for drug stores.

Prescription Statistics

Statistics on prescriptions are one of the most often called for. Total prescription sales, average prescription price, sales of prescriptions by therapeutic use, and sales of individual prescription specialties are types of prescription data requested. *American Druggist*, a fortnightly trade publication, carries a continuing prescription survey in each issue. Prescriptions are classified by use and by major drug type. Twenty-six prescription types and eight drug types are listed. The *Associated Prescription Panel Service* is a monthly analysis of 33,500 prescriptions. This service gives data on the number of times prescription specialties were used in the prescriptions analyzed. The *National Prescription Survey*, a bi-monthly publication of the Research Society averages 225,000 prescriptions per year. This survey gives such data as: number of one ingredient prescriptions, prescriptions by manufacturers, average prescription prices, and number of drug forms to fill specialty prescriptions. *Drug Topics* carries an annual prescription survey which is very useful.

New Pharmaceutical Specialties

Information on new pharmaceutical specialties, while not in the area of statistics, is closely related to this field. Requests for information on trade and chemical names of pharmaceutical specialties, their content, and use are frequently called for. Many excellent publications of this type are available. The *Modern Drug Encyclopedia* gives comprehensive data on prescription specialties in the United States. For quick identification of specialties the *American Druggist Blue Book* and the *Drug Topics Red Book* are very useful. *Facts and Comparisons* lists products of similar therapeutic use together; it is useful for this purpose, as well as for quick identification of specialties. *Unlisted Drugs*, a notable cooperative publication of industrial pharmaceutical librarians belonging to the Special Libraries Association, lists foreign as well as domestic drugs. It gives trade and chemical names and the action and dosage of specialties listed. A very useful feature of this publication is the listing of literature references which are given for each specialty.

Statistics on the Scope of the Pharmaceutical Market

Statistics related to the scope of the market for pharmaceutical preparations may require data on the incidence of disease, population figures, or mortality figures. Population data such as age, sex, marital status, race, major occupation groups are found in the *Census of Population*. The *Current Population Reports* which supplement and bring up-to-date the *Census of Population* are issued in several series. Estimates of total U. S. population, population by states, school enrollment, and the labor force are reported at irregular intervals.

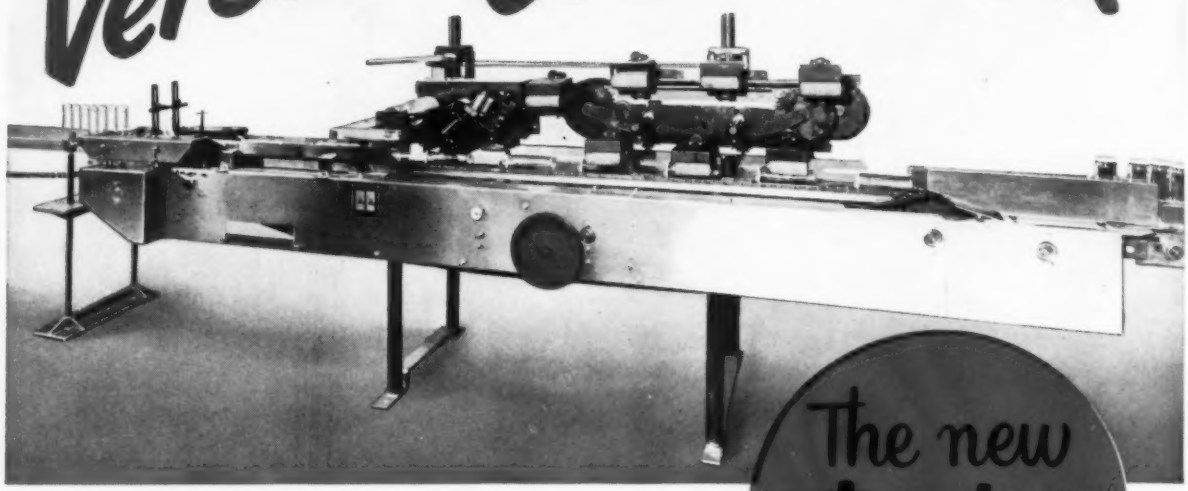
Vital Statistics of the United States is the most important source for mortality statistics. Deaths from 254 selected causes by race and sex for the United States and each state are given. Supplementing this report is the *Monthly Vital Statistics Report*, which contains mortality data for 43 causes of death. The *Communicable Disease Summary* and *Morbidity and Mortality* carry weekly summaries on the number of cases of more than 20 diseases during the previous week. *Public Health Reports* frequently carry review-type articles on specific diseases in which comprehensive statistical data on the incidence of diseases is discussed. The *Statistical Bulletin of the Metropolitan Life Insurance Company* contains a monthly summary of death rates per 100,000 policyholders from selected causes. Special surveys of specific diseases are regularly featured in which comprehensive statistical data are generally included.

Foreign Trade Statistics

Import and export statistics are championed by the Department of Commerce's publications *United States Imports of Merchandise* and *United States Exports of Merchandise*. Statistics on the amount of crude drugs imported into the United States or the export of finished pharmaceuticals are found listed in these publications. Another very useful, but somewhat out-dated publication is the U. S. Tariff Commission's *Summaries of Tariff Information*. In addition to import statistics on the foreign value, unit value, quantity and tariff rates on pharmaceutical preparations, informative, general discussions are included for each product listed. Discussions include information on countries which are leading producers, general information on the product, foreign capacity, prices, etc.

(*Continued on page 417*)

Versatile COST CUTTER



The new Thrifty LABELER

The new Thrifty Labeler will enable you to label an entire line of products — at a speed of up to 120 containers a minute.

The many advantages it offers and its low initial cost appeal to manufacturers labeling by hand as well as to those who now have automatic labelers.

Handles a gallon jug or a 4-ounce bottle — and can be set for a given size in a few minutes. Can be fed by hand or hooked up with existing filling and capping lines.

Containers entering the machine may be hot or cold, wet or dry, without affecting the sealing. That's because a unique device applies *flexible pressure* to labels before containers are discharged.

Thermoplastic or hot melt adhesive may be used. Labels may be rectangular, round or fancy cut. Gummed and embossed labels may also be used.

CONTINUOUS MOTION
40 to 120 per minute.

STRAIGHT LINE

QUICKLY ADJUSTABLE
with few change parts.

WIDE RANGE
Gallon jug or four-ounce container — hot, cold, wet or dry.

PRESSURE SEALING
Adhesive is applied over entire surface of label and rubber rollers press it firmly on container, making a strong seal. Prevents wrinkling of label due to future expansion or contraction of container.

ACCURATE LABEL REGISTRATION
on smooth or recessed surfaces, regular or unusual shapes.

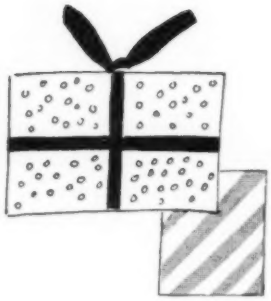
LOW COST
Low initial cost, low maintenance, high operating efficiency.

THRIFTILY PRICED

Write for full particulars

NEW YORK CHICAGO BOSTON CLEVELAND ATLANTA DALLAS
DENVER LOS ANGELES SAN FRANCISCO SEATTLE TORONTO MEXICO, D.F.

PACKAGE MACHINERY COMPANY
SPRINGFIELD, MASSACHUSETTS



Packaging and Selling

WHERE PACKAGING LEADS

Packaging has had a very strong evolutionary effect on modern marketing, according to Arthur P. Bondurant, Advertising Director of Glenmore Distillery Company. In a recent speech before the Sales Executives Club in Washington he outlined ten ways in which packaging has affected marketing. Each of these ten changes brought about by packaging has many vivid examples in this industry. See how many you can think of.

(1) In 1896, dentifrices were a luxury used only by the fastidious. At that time, the collapsible tube was a novelty. The Colgate Company put the two together and launched the dentifrice business. Last year, 820,000,000 collapsible tubes were used to package various products, mostly in this industry.

We could probably make a similar case out of the lipstick container, the freon package and valve and the polyethylene bottle.

(2) Packaging has pioneered to make possible the year-round sale of seasonal products as in Whitman's Candy, when cellophane was first used. We haven't any inspiration for this particular one but we are betting that the cosmetic or pharmaceutical people can come up with a number of examples.

(3) Re-use packages have revolutionized some marketing methods such as the various cheeses of the Kraft Cheese Company.

That one is a cinch. If this trade did not invent the re-use package, it still, like the famous Arab, leads all the rest.

(4) Some packages have been so unique that they have become their own trade-mark, such as Log Cabin Syrup. Mr. Bondurant cites two from our industry, the Shocking perfume bottle and Prince Matchbelli Crown Bottle. We could name hundreds, including John Hudson Moore's "Sportsman," "Cortley," "Early American Old Spice," "Stoppette" and literally hundreds of packages which serve as a vivid identification of the trade-mark.

(5) Dispensing packages have demonstrated ways to gain a better share of business for their sponsors. For example, the new Gillette plastic razor blade dispenser. This is also a field where both branches of this industry are supremely competent experts. Anyone can think of literally dozens of packages which have brought a triumph in convenience in new ways of dispensing in this industry and where the package has been a primary factor in advertising and marketing.

(6) The packaging of a brand new product sometimes gives the sponsor a greater share of the basic raw material business. For instance, the enormous development of frozen fresh orange juice from Florida has been grabbing a sizable chunk of the whole orange business of California. Just how this enters into an evolution in marketing we do not know but this industry has many times packaged a new product which made a sizable run toward controlling a big chunk of the raw material business. Mr. Vick could probably say something about that with Menthol, for just one instance.

(7) The right package can even revive a dropping business. The case is cited where prune packers had to put 18 oz. of prunes in each package to make sure that 16 oz. were delivered to the customer. The development of Sun-Sweet foil, heat sealed prune package allowed the prune people to go back to 16 oz. and revive this business. We have an infinitely varied history of examples of this sort which in our opinion, makes this prune example a bag of prunes. Ask the solid stick cologne people what happened to their product as compared to the amount they packaged and the amount the consumer received when this product first appeared on the market. Better packaging methods have now licked this problem and greatly expanded the use of the solid or stick cosmetic into other fields. Much better examples than this can be cited for our industry.

(8) Packages can spread distribution and act as a sampling campaign at the same time. Cited here is experience of Glenmore Distillers through their Christmas Package and its experience as a sampling operation.

This is one place where the cosmetic business will take on all comers and where pharmaceutical people with some of their striking and original sampling packages to the doctor, can hold their own in the other corner. When it comes to Christmas packages acting as a sampling operation or when it comes to using unique and original packages to get the customer to just try the product once, this industry is so far ahead that no other ought even to apply.

After fifty years of toiletries companies like Sportsman's, Cortley, Seaforth and many others worked up a gift package which sampled this type of business into more than twenty million dollars in a few days. The perfume business is now engaged in a highly original and successful campaign with many varied packaging operations to use the package as a sampling operation to expand the general business. Almost anyone in the industry could write a book of case histories of this kind right out of our industry.

(9) Packages develop their own mass display and free advertising. Cited are Post Toasties, Corn Flakes, Duz, Rinso, etc. Anyone who wants to cite a large number of cases of this industry could do it within the next three minutes.

(10) Packages can be made the basis for two companies to do a joint promotion and advertising job. For example, Duff's Gingerbread Mix who along with Reddi-Whip, combined packaging operations in this industry were once so badly run into the ground that it became a matter of concern to many companies. These combination packaging promotions have not been so frequent lately, but they are still the favorite way for a national advertiser to introduce a new product.

This industry has also been very aggressive and fertile-minded lately in combining a package promotion with other non-related products from other industries, to expand the market. Right now Lentheric has under way a tremendous promotion plan on a cooperative scale with several apparel and accessory products. Toni, Ayer and others have worked out very large promotions with doll manufacturers. So far as this trade goes, combination packages or combined package promotions are so numerous and so ancient and so well-known that we will devote no more space to category No. 10.

Their speech is an excellent analysis not always fully appreciated by advertising and marketing men, of the varied and important place which the package has played in marketing history and in changes in marketing practices. As anyone studies these well thought out ten points, they must be impressed with the very strong leadership which this industry, i.e. the cosmetic and the pharmaceutical, has provided in the packaging and marketing industry. We suspect that this industry was the first of the pioneers to apply several of these points and we are very certain that they are the principal practitioners of a number of these points.

This subject, replete with case histories, ought to make a very fine book on packaging. Here is really a valuable book waiting for an author.

Costly Premiums

During the last three years, a fairly limited number of companies, in a limited industry group, have spent over one billion dollars for premiums. At the present time, premiums are said to be costing manufacturers a little over a billion dollars a year, which means in terms of the value received by the customer more than three billion dollars.

There is every indication that this trend will grow rather than decline.

Apparently, the premium means not so much that a great many manufacturers find that they have to give away something else in order to make people buy what they have for sale as it is that in mass production and mass selling, competiton has reached a point where in any one group of products, such as in breakfast foods, they are striving for a consumption far beyond what would normally take place with traditional selling.

Growing by leaps and bounds is the combined promotion of unrelated products by companies from different industries. It would take a magician to guess where this is leading us in merchandising. All we can guess is that the next few years will probably mean some of the toughest scrapping on the sales battlefield package goods have ever seen, with many promotions which will run from the sublime to the ridiculous and heavily weighted on the ridiculous side. Some brands will pursue this gimmick to the bitter end where their brand name will fade from the consumer's mind as anything worth possessing, unless they get it for next to nothing.

We All Know It

Add another to our favorite quotations. This is from John Ruskin and here it is: "There is hardly anything in the world that someone cannot make a little worse and sell a little cheaper."

Matchbook Cosmetics

The Lipette Co. of Boston makes a growing number of matchbook type specialties which include an increasing number of cosmetic items. At the present time, these are lipstick, perfume and smelling salts. These matchbook cosmetic specialties are sold only through advertising specialty dealers.

Ladies Prefer Blondes

According to the Fawcett Woman's Group, ladies prefer blondes. In a recent survey to determine the shade preference in color rinse, the highest percentage, that is, 28.7, was for the blonde rinse.

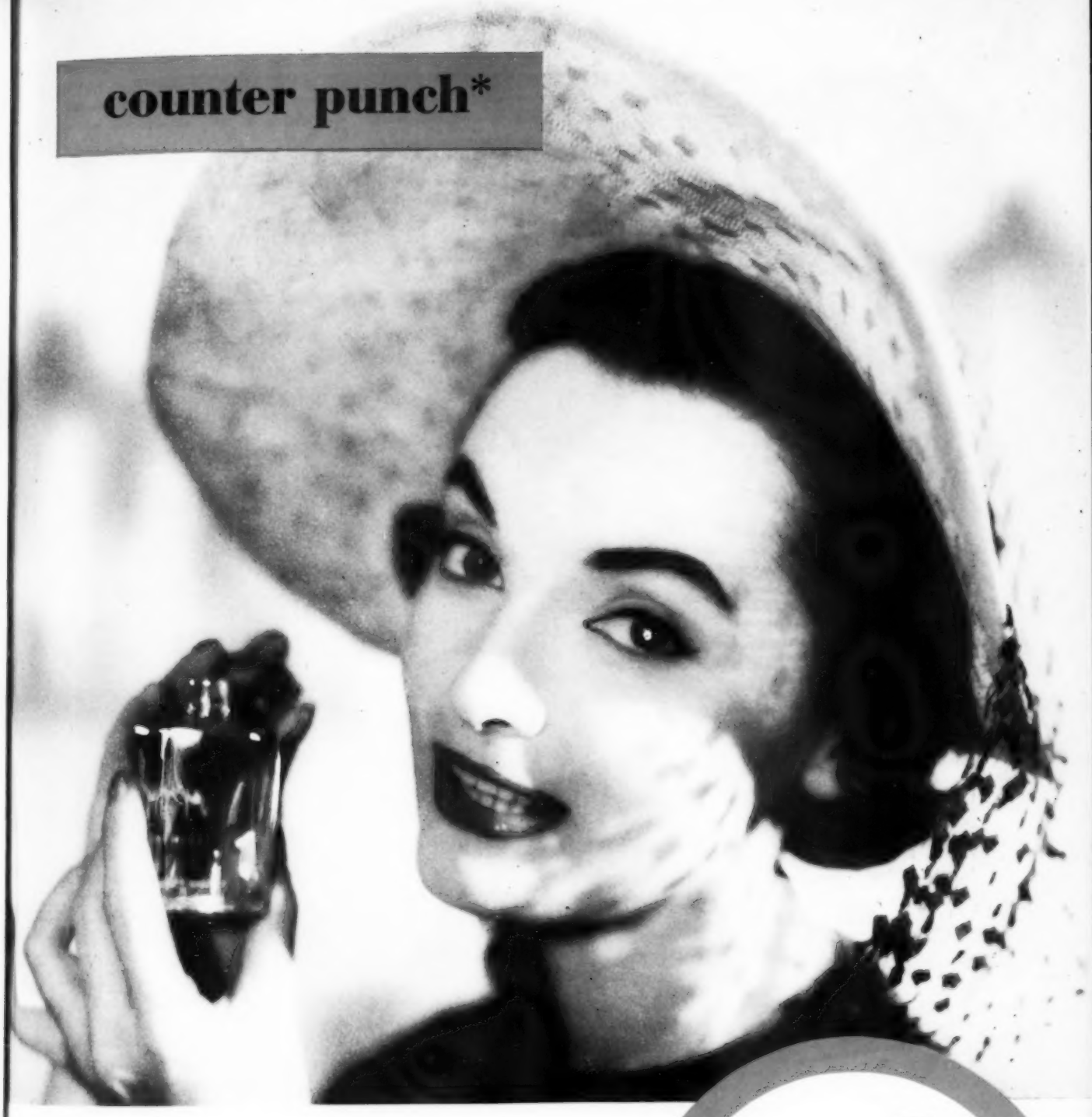
Sounds Good

Wrisley is using a motion picture film to show the girls behind the counter how they can increase sales by selling the idea of a luxury bath rather than just a cake of soap. This is a color film containing glamorous scenes of glamorous girls luxuriating in a bubble bath and using all of Wrisley's luxury bath items. It seems to us that this film would make just as big a hit, even if it did not do as much good, if it were shown at some of the salesmen's conventions.

Sampling

One million "Beautility Kits" will be distributed by Guest Pac Corporation to hospital patients. These kits are a candy box size package containing ten noncompeting items such as deodorant, mouthwash, hair preparation and perfume. The distributor reports

counter punch*



counter punch:** ***The built-in sales value of all H-A Cosmetic Containers

Their job at the cosmetic counter is to say, "Sample me—buy me."

Designed for efficiency, designed for sales, they are truly containers of beauty.

To better service you, there's an H-A factory and sales office near you.

Hazel-Atlas Glass Company Wheeling, W. Va.

GAIR FOIL CARTONS

step up sales of necessities as well as luxuries

These sparkling, irresistible Multicolor Foil Cartons are dramatically stepping up sales of various products — de luxe and standard — in super markets, chain stores, department stores and other retail outlets.

Gair-Reynolds Foiline Cartons are now style leaders in folding cartons.

Write for brochure on Gair Cartons

GAIR | PAPERBOARD FOLDING CARTONS SHIPPING CONTAINERS

ROBERT GAIR COMPANY, INC. • 155 EAST 44TH STREET • NEW YORK • TORONTO

that hospital authorities endorse the kit both for its therapeutic effect and because of good public relations with hospital and patients.

Cost to participating manufacturers is said to be $50.00 per thousand. This cost includes the copy and ad in the kit's booklet.

Glamorous Oil

Nothing, it looks like, nothing, can escape glamour in the United States. Oil refiners have always been subconsciously aware that color makes an impression on their customers. The Pennsylvania folks, for instance, take deep pride in the green hue of their products. Whereas, one other leading maker emphasizes in their publicity the pure translucent appearance. On the other hand, some of the Mid-Continent folks stress the almost chocolate color of their oil as a mark of quality. This color contest reminds us of the salmon packer who happened to be located in a place where the breed of salmon had white flesh. In order to overcome public resistance to a pale and almost colorless salmon, this genius tried to get away with an advertising slogan, "Will not turn orange in the can."

Since the oil folks have been making the best of the color which nature gave to their particular brew and are fully convinced that this color has an effect on the customer's mind, it is rather remarkable that we had to wait so long for one oil company, that is, the Union Oil Company of California, to really go all-out with a new and original color scheme. In this case, it happens to be a vivid purple.

We also understand that it is common practice for the oil folks to use a small amount of perfume to counteract unpleasant odors. The perfumes used are the volume, low-priced essential oils or very cheap compounds. A pine oil essence seems to be the favorite. We do not see why the oil people stop with these halfway measures once they are convinced, as they seem to be, that it aids in customer identification of their product and adds a good sales plus. For instance, the Union Oil Company can very well add lavender perfume or even better, an exotic kind of odor to this warm and stirring purple color that they have given to their oil.

We may yet see on the market a rose-colored petroleum oil or a carnation-colored oil suitably scented, or if somebody wants to go all-out on this new sales thinking the kind of a color and perfume which, when applied for lubrication purposes to the automobile, will cause people on the highway to turn with a sniff and say: "Something lovely has just passed by."

Seller Beware!

It's a great day for the buyer—the Supreme Court decision against the FTC in the Automatic Canteen Company case.

In 1943 when the FTC issued its complaint, Automatic Canteen was and still is a major operator of candy vending machines. More than 230,000 machines in thirty-three states were in operation. The Commission charged that Canteen had both received and solicited price cuts on candy bars and other items that went in some cases as much as 33 per cent below prices charged by the sellers to other competing customers. The clause at issue in the Robinson-Patman Act is the one which prohibits buyers from "knowingly inducing" discriminatory lower prices in their purchasing.

Now the Supreme Court in effect makes blameless the buyer of cut-rate prices and puts the burden of proof squarely and completely on the Federal Trade Commission.

Why Women Buy

It is very fashionable nowadays to conduct market research, particularly research "in depth" to find out why the customer is really buying your product instead of just coasting along on the manufacturer's pre-conceived ideas as to why the customer likes his product.

Here are the reasons why women buy, according to a large retailer:

Because hubby says they mustn't.
Because nobody has one like it.
Because everybody has one.
Because it makes them look thin.
Because it's imported—it must be good.
Because it's going to be scarce.
Because it's pretty.
Because it's a bargain.
Just because.

Waste in Advertising

In a very interesting article in PRINTERS INK about buying motivations and the place social science may play in determining these motivations, Pierre Martineau, Acting Research Director of the Chicago Tribune, had this to say in his conclusion. "I do not mean to be critical of advertising achievement, but when I think of the thousands of advertised products that haven't improved their share of market one iota in Chicago during five years, plainly the problem of influencing the consumer is more difficult all of the time."

Mr. Martineau is a specialist on the Chicago market and he confines his remarks here. It could just as well be said that while advertising is a spectacular success in contributing to the building of the American mass market for a countless variety of consumer goods it would still be true, if we had any way of actually determining advertising results, that many millions of dollars go into the printed pages and over the air which are completely missing the boat in registering any appeal that provides any kind of an incentive to buy. We are still in the era in advertising where we are largely guessing about buying motivations and in a shockingly high percentage of cases, we are undoubtedly guessing wrong. The fact that in such groups as cigarettes, tooth paste, breakfast foods and others the leading advertisers are the top sellers is not the answer. These folks still have to resort to extravagant premium deals, all sorts of conniving and fanagling with the retailer and a repeated succession of giveaway promotions. Very often it looks as if it were not a case of advertising persuading the consumer but as if

DRESSING UP makes the difference!

Here is an expensive-looking but low-cost sales-package. Our 6-ounce bottle #A-4338 and Empress molded closure combine quality and economy. Other sizes available are ½-, ¾-, 1-, 2-, 3-, 4-, 8- and 12-ounce.

Beauty... style... glamourous ACL labels are outstanding assets that help your package do an excellent selling job.

May we submit our ideas for a Duraglas sales-package for your products?

Duraglas packages are protectors of quality

TRADE MARK REG. U.S. PAT. OFF.

OWENS-ILLINOIS GLASS COMPANY • TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES

the noise and the clamor and the bigness of the operation herded the customer into buying.

Drug Store Research

Retailers have been notoriously short on research in this age of research. Some leading department stores have done a lot of work in materials handling and things of that kind but by and large the innovations that happened in retailing are the result of the imagination or daring of some one retailer whose success is copied by a lot of these retailers. The National Retail Druggists Association recently announced details of a merchandising program for the 36,000 independent retail druggist members. Included in that plan is a program for a dozen drugstores to operate as merchandising laboratories so that the Association can experiment with new methods and new equipment and new merchandising ideas. These stores are operated by members of the Association who have agreed to test each new idea as it is developed by the Association. The stores are distributed so as to give a cross-section by types of markets, population, etc.

New Display Bottle

Two perfume companies, that is, D'Orsay and Caron, are now using a new type of display bottle in place of the costly hand-blown glass bottles. Sculptural Promotions, Inc., are using a specially-formulated chip-proof composition making an exact replica of the original bottle. These replicas can be reproduced at about one-fourth the cost of the original perfume bottle even in relatively short runs.

Hope for Ideas

Very frequently people in industry are seized by an idea which they think has sales value. This happens in advertising and in packaging and it very frequently happens that a supply company comes up with an idea which they know has great value and which they want to either sell or work out a mutually profitable agreement with some one company.

The idea man has always had a frustration based upon a long record of cases where the idea was snatched out of his hands with little benefit to him.

Now a New York court has gone quite a way to clarify this situation by dismissing a recent suit based upon the seizure of an important leading company of an idea without remuneration to the alleged inventor. For future guidance here is what the court said: "In order for the plaintiff 'idea man' to succeed as a matter of law . . . he must prove independent creation of a new, novel, unique idea or a combination of ideas reduced to concrete form, disclose to the alleged user in the course of a confidential relationship; that is, he must have contractual protection against disclosure or its equivalent."

According to our guess what this means is that if you have an idea for a new package, a new product or a new machine or a new advertising idea that you want to offer to some company, reduce this idea in writing or in a sample to concrete specific terms and descriptions, approach this prospect on the basis that you are offering this concrete idea for some basis of remuneration and that you are establishing a personal confidential relationship in offering this idea and then keep records and notes of just what transpired.

Worst Boom

We like the story William C. Vernberg, Vice-President of Chrysler, told about the Chamber of Commerce executive in Los Angeles. When asked how the depression of 1932 had affected this volatile city, he replied: "We have no depression in Los Angeles, but I will admit that we are having the worst boom in many, many years."

Some Selling

Bristol-Myers is introducing its new white Ipana tooth paste containing W.D.-9 or Ipana I.C. tooth paste with its ammoniated chlorophyll ingredients in a promotion which includes giving the customer two bits as a reward for buying this product. According to Bristol-Myers, this paying a customer to try a product is swell for the retailer because he is not being asked to give away a tube, or his profits to sell any tube, and there are no bothering redemptions for the retailer and nothing else to buy. In addition to paying the consumer to use this product, Bristol-Myers will have a major advertising campaign in television and radio, in twenty-four leading national magazines and in newspapers in 104 cities. In addition, retailers will be furnished with a wide variety of point-of-sale material.

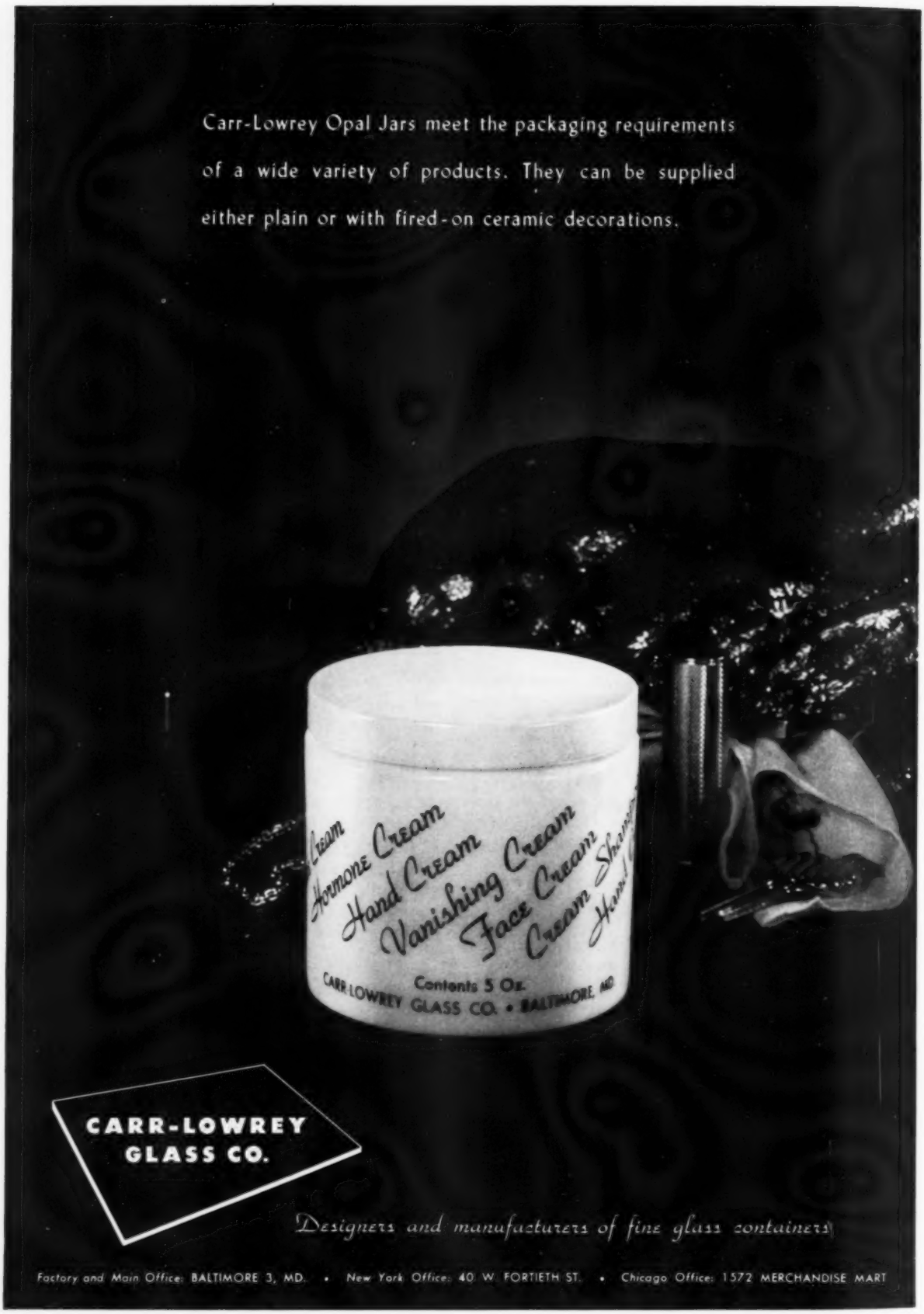
It is our guess that Bristol-Myers ought to sell some tooth paste during the coming season.

French Perfumes Growing

According to the Department of Commerce, exports of perfumes and toiletries from France to foreign countries rose to a value of 5,216,028,000 francs last year from 4,386,575,000 francs in 1951 and from 3,080,-283,000 francs in 1950. French perfumes and basic aromatic products have maintained a rank of seventh to eighth place in order of importance among French products shipped to the United States.

Principal foreign countries of destination for perfumes and toiletries in 1952 were: The United States, 802,575,000 francs, Western Germany, 915,061,000 francs, Benelux, 320,706,000 francs, the United Kingdom, 263,217,000 francs and Italy, 253,303,000 francs. It is interesting here to note that Western Germany leads all the rest in the importation of French perfumes. However, if we compare these 1952 figures with 1951 it becomes perfectly obvious that something like lavish occupation money is the factor here. In 1951, West Germany's expenditures for French perfumes was $192,409,000 francs as compared to the enormous jump of $915,061,000 francs in 1952.

Carr-Lowrey Opal Jars meet the packaging requirements of a wide variety of products. They can be supplied either plain or with fired-on ceramic decorations.



CARR-LOWREY GLASS CO.

Designers and manufacturers of fine glass containers

Factory and Main Office: BALTIMORE 3, MD. • New York Office: 40 W. FORTIETH ST. • Chicago Office: 1572 MERCHANDISE MART

Merchandising Magic....

...the revolutionary

glass aerosol

Application of the low pressure aerosol principle to glass containers opens an untapped field in modern packaging. Personal products, especially, gain sales appeal and value when offered in spray dispensers. Suntan oil, body deodorants, hair dressings, perfumes, colognes, and many other drug, cosmetic, and chemical items lend themselves to the convenience, cleanliness, economy, and protection push-button containers offer. And now, in glass, aerosol-dispensed products enjoy the added advantages of content visibility plus unlimited range of bottle sizes and shapes... permitting flexible pricing and distinctive packaging in highly competitive trades. Be sure to investigate this new trend. Have your product evaluated for aerosol dispensing possibilities. Contact Continental today.

get the *Extra* advantages of CONTINENTAL SERVICE

✱ **Complete Filling Service.** *We do not merchandise any products of our own. Our sole operation is contract and custom filling of containers with <u>your</u> products... liquid, pressurized or aerosol... in glass or cans.*

✱ **Extensive Laboratory and Production Facilities.** *Continental conducts chemical analysis and continuing research on dispensing methods and containers. Filling equipment is the finest in the industry, geared to handle orders of any size. Quality control and inspection safeguard your shipments.*

✱ **Warehousing and Drop Shipping in Bulk Lots.** *Extensive storage space permits you to use our two centrally-located plants as national distribution points, with consequent large savings on freight costs. We handle shipping and paper work. Your orders are ready when you want them.*

MAIN OFFICE • 123 NORTH HAZEL STREET, DANVILLE, ILLINOIS

CONTINENTAL FILLING CORPORATION

PLANTS • DANVILLE, ILLINOIS — HOBART, INDIANA

CONTRACT AND CUSTOM FILLING

LIQUID SPRAY FOAM

EVERY PRESCRIPTION IS A "WONDER DRUG" TO SOMEONE

Much has been said and written about the new "wonder drugs" developed by our country's great pharmaceutical laboratories. Most of them come to you in Kimble Opticlear Vials—fit containers for such fine products.

But every prescription that stops pain, or cures illness is a "wonder drug" to its user—a "wonder drug" formulated by the professional skill and to the high ethical standards of your pharmacist.

Your individual "wonder drug" is likely also to be packaged in a Kimble Opticlear Vial made of clear, sparkling glass with an easy-in, easy-out closure, that is *moisture-proof* beyond anything else on the market. Kimble Opticlear Vials have helped make merchandising successes for a wide variety of pharmaceutical and proprietary tablets and capsules, fancy food items, spices and advertising novelties.

Kimble Opticlear Vials are only one of the many Kimble contributions of engineered glass products to the nation.

Kimble Serves—with Glass

KIMBLE PRODUCTS

Communication and Power Insulators . . . Opticlear Vials . . . Television Bulbs . . . Color-Break Ampuls . . . Insulux Glass Blocks . . . Laboratory Glassware . . . Thermometers and Hydrometers . . . Towel Bars . . . Glass Rod and Tubing . . . Chemical Resistant Glassware . . . Custom-made Bottles . . . Pressed Glassware . . . Clinical Glassware

KIMBLE GLASS COMPANY

Toledo 1, Ohio—*Subsidiary of Owens-Illinois Glass Company*

Toni has added the Children's Prom Kit to the Prom Home Wave line. It is designed specifically for girls of 14 years and under, and carries a money-back guarantee that it will "take" every time on young, hard-to-wave hair.

Burroughs Wellcome has prepared Aerodrin brand Intranasal Solution, an antibacterial and decongestant nose drop. It does not cause central stimulation or impair ciliary movement.

The Upjohn Co. has released Cortisone, Ophthalmic Ointment, a well-tolerated ointment containing 15.0 mg. of Cortisone Acetate per gm. The base melts rapidly at the temperature of the eye and mixes readily with tear secretions. It is indicated in the treatment of various forms of conjunctivitis, keratitis, iritis and similar conditions. Also announced is the preparation of Erythrosulfa Tablets, containing erythromycin, sulfadiazine, sulfamerazine and sulfamethazine. They are indicated in the treatment of pneumococcic, staphylococcic and streptococcic infections.

Ciba has introduced Privine in nebulizer form, including an eye-catching drug-store counter display.

Irwin, Neisler & Co. is distributing Unitensen, for use in acute hypertensive states, in preeclampsia, eclampsia, and in preeclampsia with underlying essential hypertension.

Johnson & Johnson has introduced a new Band-Aid Plastic Strip with "Super-Stick" which sticks more rapidly than any previous adhesive bandage, and provides far longer adhesion.

Chesebrough Manufacturing Co. has placed a new Vaseline petroleum jelly jar on the production line. The new design, named "E-Z Stack," changes the cap and base of the old jar, replacing the dome-shaped top with a convex shape and the flattened bottom with a concave curve. This makes it possible to stack several jars securely on top of each other.

Lancome Sales Inc. has added Tresor to its perfume line, appearing in a diamond-cut flacon, and in a teardrop purse flacon.

Panray Corp. has prepared a new buccal troche called Parluguan, for the management of peptic ulcers. By sucking these troches, according to Panray, it is possible to provide continuous acid neutralization, reduce gastric acidity, promote rapid healing of peptic ulcers, and reduce symptomatic ulcer pain.

Lederle is offering a special combination of products for the control of mastitis—on the purchase of 12 tubes of Aureomycin udder infusion ointment, the customer will receive a free bottle of udder lotion, saving a total of $1.52. This special offer will extend through September and October.

Lobica-Debruille, Inc., New York, has announced that Scopodex, a safe, effective and quick-acting remedy for all forms of motion sickness, was recently released by the FDA for non-prescription sale. It is virtually non-toxic, and does not cause drowsiness. It can be administered to children and pregnant women.

Norwich Pharmacal Co. is now distributing on a national scale Orange Flavored Adult Aspirin, a sweet orange-flavored aspirin that melts on the tongue. No water is necessary.

Parke, Davis & Co. has prepared Chloromycetin Otic, a clear, colorless solution containing 0.5 per cent Chloromycetin in propylene glycol with one per cent benzocaine added. It is used for the treatment of acute and chronic infections of the external and internal ear.

The company has also prepared Dilantin Suspension, a specially designed preparation of Dilantin particularly adaptable to the treatment of children. It is used for the treatment of epilepsy, particularly grand mal, or psychomotor seizures.

Eaton Laboratories has announced a new dosage form of Furacin Nasal, called Furacin Nasal with Neo-Synephrine.

Lilly is offering Clopane Hydrochloride Solution, a vasoconstrictor of prolonged action, in a new plastic squeeze

Look at all three-

One of Continental's aerosol cans is tailor-made for you!

Between them, these three styles of aerosol cans will handle any sprayable product in the non-food field. As part of our tailor-made service, we'll lithograph them to your taste, deliver anywhere you say, put you in touch with valve suppliers and commercial fillers if you wish. Why not give us a chance to work with you — not just as suppliers, but as interested counselors and friends.

Dome Top—Domes attached and equipped with standard 1" curled opening for all popular valves, 12 oz. or 6 oz.

Concave Top — Tops furnished loose and perforated with hole-punch for specified aerosol valves, Regular (12 oz.) or Midget (6 oz.).

Dome Top — Domes furnished loose and perforated with hole-punch for specified aerosol valves, Regular (12 oz.) or Midget (6 oz.).

TAILOR-MADE PACKAGE SERVICE

CONTINENTAL CAN COMPANY

CONTINENTAL CAN BUILDING

100 EAST 42nd STREET NEW YORK 17, N. Y.

Eastern Div.: 100 E. 42nd St., New York 17 • Central Div.: 135 So. La Salle St., Chicago 3 • Pacific Div.: Russ Building, San Francisco 4

Doin's ... (CONTINUED)

bottle, as a convenient way of relieving nasal congestion caused by colds or allergies such as hay fever.

Block Drug is offering a new consumer deal on Amm-i-dent tooth paste by providing 2 tubes for 59 cents. A display pack of two tubes will tie-in with the new anti-enzyme advertising theme.

The S. E. Massengill Co. has prepared Ampuls and Tablets Adrenosem for conditions characterized by increased capillary fragility and permeability.

The Alfred D. McKelvy Co. has announced its new Black Watch line of men's toiletries, and in particular, the Black Watch Shave Lotion and Cologne. They have a richly diffusive leather-and-tobacco aroma with deep woody notes, and are called Coeur de Lion.

Abbott has prepared Pediatric Erythrocin Suspension, a ready-mixed, good-tasting cinnamon - flavored liquid which remains potent at least 18 months. It is especially recommended against staphylococci, streptococci, and pneumococci, and is less likely to alter the normal intestinal flora than other oral antibiotics, except penicillin.

Lilly is also offering Trinsicon, a wide, range hematinic which, on a dosage of two pulvules a day, provides full therapeutic requirements in the anemias. It is designed to treat all the anemias which respond to known therapeutic agents.

Smith, Kline & French has introduced Daprisal, a new, non-narcotic analgesic preparation which is effective because of multiple synergism among its components. The preparation contains Dexedrine Sulfate-Amobarbital, acetylsalicylic acid and phenacetin.

Dorothy Gray has announced the preparation of Satura, a complete "moisturizing" treatment cream which benefits the skin both from the outside and inside. Through its humectant action, Satura draws moisture from the air to hold against the skin. Because of its hormone content, it promotes moisture retention within the skin to cushion it against the appearance of lines and wrinkles.

Smith, Kline & French has announced that the Council on Pharmacy and Chemistry of the American Medical Association has accepted Benzedrine Sulfate Spansule capsules, a new product employing a new oral dosage form.

Schering has prepared Chlor-Trimeton Maleate Cream, an antihistaminic and antipruritic. It is indicated for the management of pruritic and allergic skin disorders, such as atopic dermatitis, contact dermatitis, pruritus ani, pruritus vulvae and poison ivy dermatitis.

Burroughs Wellcome & Co. has announced that it recalled from wholesalers and retailers its new anticholinergic, Triloid brand Tricyclamol because of a similarity in trade names. The firm discovered that a product bearing the trade name, Triloids, had been previously issued by another company, and might still be available through some drug outlets. Since the other product contains bichloride of mercury, Burroughs Wellcome telegraphed all wholesale distributors requesting that they withdraw all stocks from retailers.

It was emphasized by Burroughs Wellcome that this recall is in no way connected with the safety or efficacy of the product itself.

Toni's White Rain Lotion Shampoo will now be available in the new 16-ounce "Cloudburst" bottle.

Sindar Corp. has developed a new all-purpose, inexpensive deodorant, Deodall No. 1. It is recommended for use in various industrial odor applications where only an inexpensive masking agent can be used.

C. B. Fleet Co. has designed the "Fleet Enema," a labor-saving technique of enema administration. The unit consists of a polyethylene bottle and a polyethylene rectal tube, hermetically sealed in a cellophane envelope.

CROWN SPRA-TAINER Does It Again!

"stop that smell!"

3-WAY AIR REFRESHER is a pressure product of Reefer-Galler, Inc., New York. This popular spray preparation serves every deodorizing need throughout the home, quickly conditioning the air by scientific *triple action*. 3-WAY AIR REFRESHER is packed in the "Modern Design" and seamless construction of the world's original and leading propulsion can: Crown SPRA-TAINER.

In addition to aerosols, Reefer-Galler also package an extensive line of solid and liquid products in other types of Crown Cans. All products are readily identified by a merchandisable "family design," perfectly reproduced by Crown's famous Lithography Service.

Whatever you need in the way of Cans or Service, a cordial welcome awaits you at Crown.

These are among other familiar Reefer-Galler Products in Crown Cans.

One of America's Largest Can Manufacturers

CROWN CAN
PHILADELPHIA
Division of
CROWN CORK & SEAL COMPANY

PHILADELPHIA, CHICAGO, ORLANDO, BALTIMORE, NEW YORK, BOSTON, ST. LOUIS

RICHFORD SPILLPROOF* PERFUME FLACONS

THE PURSE SIZE FLACON THAT CHANGED THE PERFUME MERCHANDISING OF A NATION!

THE NEW SQUARE SPILLPROOF

MEMO

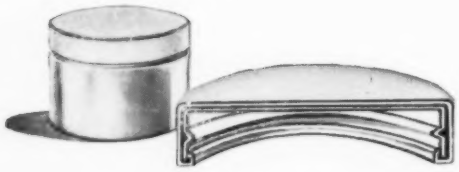
SALES TIPS TO REMEMBER FOR BOOSTING YOUR PERFUME SALES

1. The lower unit price of expensive perfumes packaged in Spillproof purse size flacons enables your woman customer to try many different fragrances at relatively small expense. She *actually pays* to sample fragrances . . . once sold she (or the men in her life) will buy larger sizes.
2. Perfume carried daily in Spillproof purse size flacons is consumed far more rapidly than standard size perfumes left on your customer's dresser.
3. The convenient size and lower unit price of perfumes in Spillproof purse sizes entice your woman customer to carry and use both "day" and "evening" perfumes, boosting consumption even more.
4. The lower unit price of perfumes in Spillproof purse sizes enables your woman customer to accept perfume normally beyond her means in her everyday life. She no longer thinks of it as an expensive "evening out" luxury.

RICHFORD CORPORATION
251 FOURTH AVE., NEW YORK 10, N. Y.

MANUFACTURERS:
Early Response Sensational!
Write today for samples and prices.

Merit SEAL



• Merit **SEAL** outsells all competition. The demand is greater because the "closure" is better.

See for yourself how really attractive and efficient Merit Seal is!

NOW AVAILABLE IN THE FOLLOWING NEW SIZES: **38, 40 and 45 mm.** Other Sizes—48, 51, 53, 58, 60, 63, 66, 70, 75, 83, 89 and 100 mm.

CROWN CORK SPECIALTY CORP.
DIVISION OF
Crown Cork and Seal Co.
St. Louis 15, Missouri

Serves You Right!

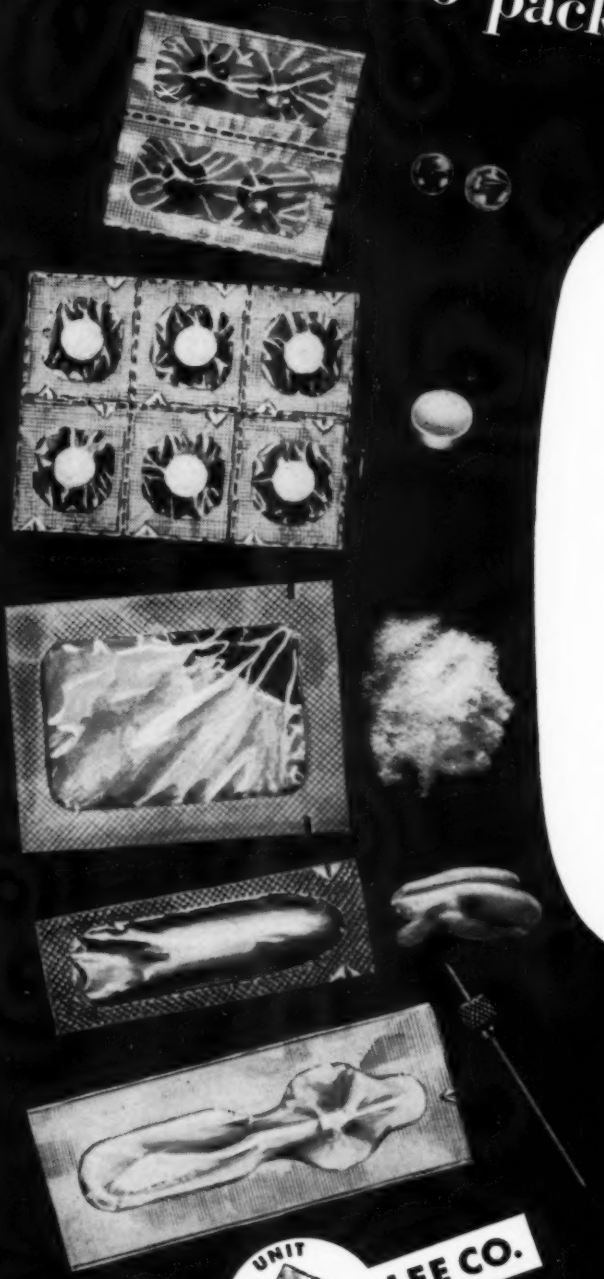
LUSTEROID
VIALS and TUBES
Pack your Products with These Advantages

Minimum package weight
Product visibility
Complete protection
Printability
Unlimited colors
Savings in labeling
Savings in handling
Savings in shipping

These modern plastic containers come in sizes from ¼" to 1¼" in diameter and lengths up to 6". Cork, slip-on, or screw-cap closures. Write for details and samples today.

LUSTEROID
Container Company, Inc.
10 West Parker Avenue
Maplewood,
New Jersey

You have no packaging problems



Not when you have the complete facilities of Ivers-Lee at your disposal. For here at Ⓘ we can design your package to fit your product . . . be it capsule, tablet, powder or cream—hypodermic needle or any other odd shaped article. The quantity can be great or little—for sampling or for standard sale use.

The Ⓘ Super-Sealtite package, with *Feather-Light Tear, is adaptable to a very great variety of products, packaging materials and package types. This is your guarantee of the world's finest package at a cost below that of ordinary packages.

To have the Ⓘ Super-Sealtite package for your product calls for no capital outlay on your part. You simply send us your product in bulk—we will return it to you packaged and ready for shipment . . . and in time to beat all reasonable deadlines.

Your request for Ⓘ Super-Sealtite samples and details of the complete Ⓘ service will receive a prompt reply.

*REGISTERED

IVERS UNIT IL PACKAGING LEE CO.
215 CENTRAL AVENUE NEWARK, NEW JERSEY

***Attention!* Super-Sealtite provides —**

*Feather-Light Tear (not just a series of pin-point perforations).

Double tear notches—on opposite sides of each pocket.

Complete Protection—attained through selection and adaptation of the right packaging material for your product.

Easy Adaptation of package to varying product sizes, requirements and new package design.

These are the plus features you get from . . .

Creators of SUPER-SEALTITE — the Package That Never Stops Selling

YOU NEED PRECISION

in chemicals for making ANALGESICS

Which of these Baker Fine Chemicals best suits your formula?

Benzocaine	Acetanilid
Acetophenetidin	Salicylamide
Methyl Salicylate	Sodium Salicylate
Procaine Hydrochloride	Acetylsalicylic Acid

An analgesic preparation can leave no room for doubt. It must act effectively—quickly—and safely.

That's the reason pharmaceutical manufacturers use infinite care in making these agents for relieving sensibility to pain. Only by so doing can they protect the reputation of their product and their good name.

This infinite care *begins* with the selection of fine chemicals—vital ingredients in the making of analgesics.

Each fine chemical to be used must be closely questioned on *all four* of these points:

1. Is it of the highest purity?
2. Is it stable?
3. Does it offer constancy of pH in solution and when mixed with buffer materials?
4. Is it constant in color?

On this page are listed several Baker Fine Chemicals for analgesics. In this list, or in the Baker line, there are the right ones for you. Whichever they are, those fine chemicals bring you positive, affirmative answers to *all four* questions listed above.

No matter what product you manufacture—if it requires one or more chemicals of measured purity, stability and uniformity—specify Baker.

Address: J. T. Baker Chemical Co., *Executive Offices and Plant*, Phillipsburg, N. J.

Baker CHEMICAL

Baker Chemicals

REAGENT • FINE • INDUSTRIAL

News . . .

Emelin in Pfizer Exec. Post

Arthur C. Emelin, until recently president of Schenley Laboratories, has joined Pfizer Laboratories, division of Chas. Pfizer & Co. as director of operations, according to Thomas J. Winn, general manager. Thomas G. Bradley has been appointed director of sales and promotion.

ARTHUR C. EMELIN

Davis & Geck Plant, Danbury

Davis & Geck, Inc. formally opened its new plant at Danbury, Conn., on August 26, marking a year-long move of the firm's entire manufacturing facilities from Brooklyn. The company will maintain full production throughout the year.

The office and executive staff occupied the new quarters on August 31, according to C. P. Collins, executive vice-president, who stated that about 500 people, mostly from the Danbury area, will be employed when the move is completed.

A unit of American Cyanamid Co., Davis & Geck, Inc., is one of the nation's leading suppliers of surgical sutures and other surgical specialties. The new plant is located on a 10½-acre site on Casper St., Danbury, and provides over 100,000 square feet of floor space. The company has also purchased an existing building on the site which provides over 16,000 square feet of floor space, and a frame house.

Change of Address

The general purchasing headquarters of General Aniline Works division and General Dyestuff Corp. are now located at Linden, N. J.

With Pitman-Moore 30 Yrs.

Irving Russell and Leland Funk, two of Pitman-Moore Company's leading salesmen, have completed 30 years of service with the firm. Mr. Russell covers northern Illinois; Mr. Funk, northern Indiana and southern Michigan.

Fletcher Leaves Massengill

H. G. Fletcher, general sales manager of the S. E. Massengill Co., resigned August 14. He had been the Massengill sales manager since 1932.

THOMAS G. BRADLEY

Clark Appointed by Council

Dr. Berton S. Clark, scientific director of the American Can Co., has been appointed a member of the Food and Nutrition Board of the National Research Council. He is also chairman of the council's committee on packing, packaging and preservation, and a member of the advisory board on quartermaster research and development.

Herrick Retires from Heyden

E. R. Herrick, plant manager of Heyden Chemical Corp.'s Fords, N. J., plant since 1940, and associated with Heyden for 30 years, has retired, according to Simon Askin, president. He will continue as a consultant.

Arthur W. Willis, formerly assistant plant manager of Heyden's Princeton, N. J., plant, succeeds Mr. Herrick as manager of the Fords plant.

Join Wm. T. Thompson Co.

Carlton M. Hack, who has had more than 20 years of vitamin sales experience with Standard Brands and Eli Lilly, has joined the St. Louis sales force of Wm. T. Thompson Co. His territory will range east of Denver.

Roger Griswold has joined the Los Angeles office.

Award to Wallingford

Dr. Vernon H. Wallingford, director of organic research for Mallinckrodt Chemical Works of St. Louis, received the 1952 Award of the Chilean Iodine Educational Bureau last month. He was presented with a check for $1000 and a diploma citing the accomplishments by Dr. Justin L. Powers, chairman of the Awards Committee and Editor of the scientific edition of the American Pharmaceutical Association Journal.

The end result of Dr. Wallingford's research was the production of an X-ray contrast medium known as Urokon. It is widely used by radiologists to make visible on X-ray film such organs of the body as the kidneys and urinary tract.

DR. VERNON H. WALLINGFORD

Heads Lehn & Fink Research

Dr. J. B. Nagler has been named head of the research, development and quality control laboratories of Lehn & Fink Products Corp., according to Edward Plaut, president.

He will be responsible for the development of new products throughout the drug, cosmetic and disinfectant fields. He will also supervise the Lehn & Fink research organization.

Dingfelder in France

Adolph Dingfelder, export executive of Felton Chemical Co., left on a trip to France on September 12. He will represent Felton at the opening of the new, larger office and plant facilities of the company's French affiliate, Felton Company France, S.A.R.L. in Versailles.

White Joins Emerson Drug

Dr. Joseph M. White, professor in pharmacology at the Yale University School of Medicine, has been appointed director of medical research by the Emerson Drug Co.

Coty Sales Meeting

Coty, Inc. held a sales meeting at the executive offices during the week of August 3, with the theme, "Selling days are here again." The meeting was presided over by Jean Despres, executive vice-president in charge of sales, and was attended by the entire sales force of 57 salesmen from all over the Country, and by the Coty supervisors

Philip Cortney, president, and Grover A. Whalen, chairman of the board, addressed the meeting.

A dinner for all those attending the sales meeting, and for all department heads of the executive offices and the factory, was held on August 4. Guests of honor at the dinner were Dean Hamilton Caziarc, who was appointed district manager for the Southwest district; Joseph V. Bellavia, who has been appointed to the newly created post of coordinator of divisional operations of Coty — Marie Earle—Lucien Lelong; Henry F. Kriete, district manager for the West Coast, with headquarters in Los Angeles, who received a Gold Medal in honor of his 25 years with Coty; and Donald B. Clement, supervisor of sales agents division, who celebrated his 20th year with the company.

Eads Promoted by P-D

Dr. F. E. Eads has been promoted to manager of the department of veterinary medicine at Parke, Davis & Co., according to Graydon L. Walker, vice-president and director of U. S. and Canadian sales and promotion. Dr. Eads, assistant manager of the department since 1951, succeeds the late Dr. Hilton O. vonRosenberg, who died July 25.

With D&O Flavor Dept.

Charles Dwyer, formerly with Philip Chaleyer Inc., and Willem Lasthuysen, internationally known flavor chemist, have joined the flavor department of Dodge & Olcott, Inc.

WILLIEM LASTHUYSEN

Philip Cortney, Coty president, left, congratulating Joseph Ballavia, on his recent appointment with Coty, at sales convention in New York. Left to right: Ray Sanders, executive director, Marie Earle; Joseph Stein, president, Lucien Lelong; Mr. Cortney; Mr. Ballavia; and Jean Despres, executive vice-president in charge of sales at Coty.

P-D Employees Tour Plant

About 4,000 employees of Parke, Davis & Co. are being shown how their individual jobs fit into the firm's over-all operations through a system of unique plant tours which began on August 10. Each day for six weeks 120 persons are being taken through the Parke-Davis laboratories in Detroit to "enable the employees to learn more about the company's history, production and research laboratories and products," according to Harold K. Daniels, personnel relations director. Eight groups, each consisting of 15 employees, are being taken on the daily tours which last four hours and include a refreshment break in the company's snack bar.

Special plant guides, who conduct regular company tours for medical and pharmaceutical groups, explain the various manufacturing, research and administrative processes.

Resigns from Dermetics

Nelson Millard has resigned as sales manager of the drug and department store division of Dermetics at Rilling Dermetics Co.

CHARLES DWYER

Pfizer Steroid Course

Pfizer Laboratories has been giving a week's intensive course in steroid hormones during the past two months to its more-than 600 professional service representatives, district managers and regional managers, in preparation for marketing of the Pfizer-Syntex hormone line.

Planned by Dr. W. Alan Wright, director of medical service, and Paul C. Sullivan, director of training, the program started at the Brooklyn plant with a one-week's class taught by distinguished guest lecturers such as Dr. Lawrence Kinsell of the University of California and Dr. George C. Escher of Memorial Hospital, New York, as well as the Pfizer medical service staff. A special training team toured the country, giving classes in Dallas, Chicago, New York, Boston, Philadelphia, Cincinnati, San Francisco and Kansas City in order to impart clinical and product information to Pfizer's field representatives. These representatives will receive each month a copy of the Pfizer-Syntex Steroid Review which is mailed to leading endocrinologists in the United States.

Rounding out the program, a group of Pfizer regional managers accompanied by George Guess, sales manager, visited the Syntex, S. A., plant in Mexico City to observe the manufacture of hormones.

McManus with Milkmaid

Daniel W. McManus, formerly vice-president of Roger & Gallet, U. S. A., and general sales manager, Elizabeth Arden of Canada Limited, has been appointed general sales manager of Milkmaid Inc.

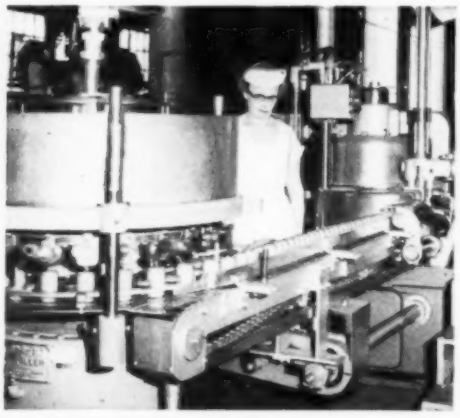
Taking the place of a million-and-a-half missing men

As you know, quality in the manufacture of closures is essential . . .

But today, closures must know how to sell, too. For there are a million-and-a-half *fewer* sales clerks in food stores now than there were in 1943, and 84 cents out of every purchase dollar of mass-consumed, fast-consumed items are sold by self-service. Your advertising, merchandising, and packaging are the only substitute your product has for these million and a half missing members of your sales force to the home market.

Quality is vital. Experts constantly try out new ideas . . . tear them apart to find trouble before it starts.

Research keeps quality in check
This machine accurately grinds contours on pre-hardened blanks for precision curling, knurling and threading of metal closures.



Greater speeds with better caps
Quality caps are built to take the abuse of high-speed lines. Result: greater capping efficiency.

Today's package must sell itself
Shoppers pause only 8 seconds before choosing a brand. Your package must know how to do a sales job and do it quickly.

***BEFORE*—This package lacks the final touch.**
Good grooming from "head to foot" is the mark of a self-salesman.

***AFTER*—Salespackage that's dressed to sell.**
See what a big difference a little change makes. Smart CLOSURE-label combination attracts instant attention.

CLOSURE DIVISION

OWENS-ILLINOIS GLASS COMPANY

Toledo 1, Ohio

Branches in Principal Cities

Sheffield tubes

Breck Cream Treatment for Beautiful Hair, is one of the many fine hair preparations offered by Breck. Quality of product is matched by the quality of the container—Sheffield Collapsible Tubes. Product and container alike are the result of generations of leadership. Compare for yourself this matchless excellence of printing on tube metals—an achievement of craftsmen schooled in Sheffield's century-long tradition of producing only the finest. For gratifying sales *results*, we urge you to order all your collapsible tubes from *Sheffield*.

Like a display leader for your product? Call on your nearest Sheffield Tube representative for free catalog, samples, quotations.

THE SHEFFIELD TUBE CORPORATION

Home office—New London, Conn.
Sales Offices—New York, Chicago, Los Angeles

A. R. SCHRAMM

DR. ROBERT H. HOLLIS

J. PAUL MANNIN

Abbott Promotions

A. R. Schramm has been promoted from executive associate general sales manager to associate director of sales, Abbott Laboratories, according to Herbert S. Wilkinson, vice-president and director of sales. He will continue to manage the drug trade division and will assume additional administrative responsibilities.

Dr. Robert H. Hollis has been promoted from assistant manager to manager of the veterinary division; J. Paul Mannin, district hospital representative at Tulsa, Okla., has been promoted to the hospital division sales administrative staff at the home office; R. F. McGrew, assistant sales manager and field manager of the hospital division, has been transferred to Reading, Pa., where he will be manager of a new district; and G. C. Marshall, professional service representative in Washington, D. C., has been promoted to special government representative with responsibility for liaison with government agencies.

Three district managers, William J. Murphy, Buffalo; Irwin A. Hodge, St. Louis; and J. R. Mayes, Dallas, have been made managers of branch offices.

Edwal Labs. Changes Name

The Edwal Laboratories, Inc. became the Ringwood Chemical Corp. on September 1, a name change which was voted at a stockholders' meeting on August 11. The new corporate title more accurately describes the present activities of the company, which has grown in 21 years from a 2-man laboratory to a major manufacturer of organic chemicals and photographic processing formulations. The same organization and technical staff will continue under the leadership of Dr. W. S. Guthmann, as president of Ringwood.

The name change also marks the complete separation of the Edwal Scientific Products Corp. from Ringwood Chemical Corp., the former having been organized by Dr. Edmund W. Lowe in 1950 to market a line of photographic products under the Edwal label.

Ringwood Chemical has just completed its most successful fiscal year. Earned profits and new investment have permitted the addition in the last two years of 5 new buildings, process equipment, a modernized packaging line, and additional tank storage facilities for bulk raw materials and anhydrous ammonia.

Named by Bristol Labs.

Charles Gelber has been appointed assistant division manager, central division, of Bristol Laboratories Inc., with headquarters in Chicago, and George Williams has been promoted to assistant division manager of the West Coast division, working out of San Francisco, according to R. A. Anderson, vice-president in charge of sales. Mr. Gelber had formerly represented Bristol Laboratories in Florida, and Mr. Williams had been district manager in California.

Gerathy with Warner-Hudnut

Albert J. Gerathy has joined Warner-Hudnut, Inc., as director of planning, procurement and distribution and will coordinate these activities on a company-wide basis. He had previously been associated with Schering Corp. for 16 years.

Thomas Named by Monsanto

Thomas B. Thomas has been assigned to the branch sales office of Monsanto Chemical Company's organic chemicals division, according to John L. Hammer, Jr., general manager of sales for the division.

Squibb Conference

The first of a series of regional and field managers conferences to be held since the recent reorganization of the E. R. Squibb & Sons field management staff, took place at the Hotel Plaza, New York, on August 7 and 8. Six newly-appointed eastern regional sales managers attended the meeting: Rease Inge, Atlanta; Arthur M. Covell, Boston; Paul A. Freeman, Chicago; Frank A. Chatfield, Cleveland; John Chervenak, New York; and O. J. Phillips, Philadelphia.

John C. Leppart, president, and other top executives, spoke at the conference, setting forth the aims and objectives of the company in the current sales campaign.

Top executives and newly-appointed eastern regional sales managers of E. R. Squibb & Sons during a conference at the Hotel Plaza, New York, August 7 and 8. Seated left to right: W. R. McHargue, vice-president; J. C. Leppart, president; J. J. Toohy, vice-president; and W. L. Arscott, vice-president. Standing, are regional sales managers: John Chervenak, New York; Rease Inge, Atlanta; Paul A. Freeman, Chicago; O. J. Phillips, Philadelphia; Frank A. Chatfield, Cleveland; and Arthur M. Covell, Boston.

Schoettle Case Histories:

true story of a

Purchasing Agent in a Lather

CASE HISTORY #39 The 200,000 folding paper boxes that this company* ordered were ready—and then the Purchasing Agent phoned. He was really in a lather! A raw material used in the manufacture of the product became suddenly unavailable and the boxes were useless. What could we do about it, he pleaded. We resold these boxes to another customer at no loss to the manufacturer for whom they were originally made. We work hard to get customers. We work hard to keep customers, that's why purchasing agents love us!

CASE HISTORY #62 A large electric supply company* required an original construction of a folding paper box in which to ship bolts, nuts and screws; and also provide a dispensing bin on the shelf. The purchasing agent worked himself into a lather trying to figure out a box that could do a "complete" job. Half a dozen manufacturers submitted "Goldbergs" that were totally impractical. Finally he did what he should have done immediately—call on Schoettle. In short order, Schoettle produced a box that was praised very highly and the Purchasing Agent relaxed and smiled again.

• Whether it's speed or ingenuity, depend on Schoettle to produce! We specialize in "unlathering" purchasing agents . . . we never let them down! For quality folding paper boxes—as you want them—when you want them, depend on Schoettle!

*name on request

EDWIN J. SCHOETTLE CO.

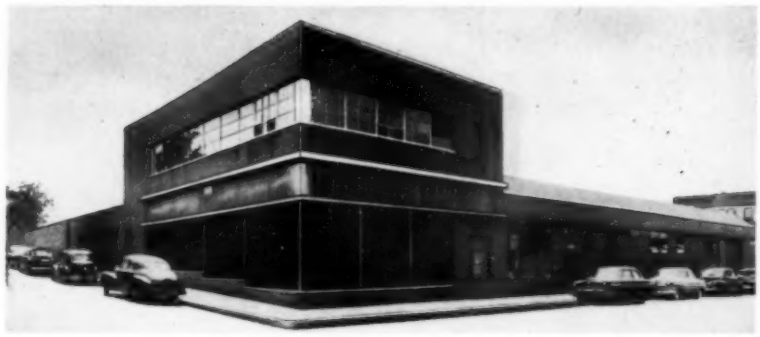
533 NORTH ELEVENTH STREET • PHILADELPHIA 23, PENNA.

Designers and Manufacturers of Paper Boxes with Buy Appeal

Ivers-Lee Expansion

Ivers-Lee Co. has purchased a third plant in Newark, N. J., in order to segregate its various types of packaging services. A particular packaging function will be concentrated in each of the three plants, a move which is expected to increase the output of all types of packaged products and reduce the production time.

A formal announcement of the opening of the new plant will be made by Mr. Volckening, president, when all renovations are completed, probably in 6 to 12 months.



Building at 320-332 Orange St., Newark, which Ivers-Lee Co. has purchased for use as a third plant. Company will now be able to segregate its various types of packaging services by concentrating one packaging function in each plant.

Downs Promoted by P-D

Sam N. Downs, Jr., has been promoted to field manager in the Kansas City branch of Parke, Davis & Co., according to Carl Johnson, United States and Canadian sales manager. He will serve under the direction of C. U. Fisher, Kansas City branch manager, and will supervise sales territories from his headquarters in Oklahoma City.

Hohhof with D & O

Jack Hohhof, formerly chief industrial chemist and supervisor of the flavoring ingredient division of Oscar Mayer & Co., has joined the technical staff of Dodge & Olcott. He will work as a flavor consultant, from the company, to manufacturers with specific flavoring problems in the food field.

Ungerer Execs. in Europe

Kenneth G. Voorhees, president, and Ivon H. Budd, vice-president, of Ungerer & Co., sailed to Europe in August. They are visiting the various producing areas in England, Holland, France, Spain, Italy and Sicily in order to make a survey of crops and sources of supply of materials emanating from these countries.

They plan to return to New York early in October.

KENNETH G. VOORHEES

Latin Americans Visit Lilly

Six Latin-American physicians, who are taking advanced medical studies in the United States under Eli Lilly & Co. fellowships, made a tour of the company facilities last month.

The group included Dr. and Senhora Octavio Ribeiro Ratto, Dr. and Senhora Danilo de Albuquerque, Dr. Jose E. Molestina, Dr. Raul Alfaro Alvarez, and Dr. Gustavo Gordillo Paniagua. They visited the Lilly Research Laboratories, the Lilly Clinic at Indianapolis General Hospital, the Kentucky Avenue plant and the Lilly Biological Laboratories at Greenfield.

Dr. J. G. Evans and Dr. K. G. Kohlstaedt, of Lilly's clinical research, were hosts to the visitors.

Kessler Expands Agency

Kessler Chemical Co. has expanded the agency of R. E. Flatow & Co. to include the entire West Coast, in addition to its current work as San Francisco representative.

Waller with Baker & Bro.

Wayne M. Waller has been appointed manager of the Baltimore branch of H. J. Baker & Bro., according to H. V. B. Smith, partner in the organization.

IVON H. BUDD

Controllers Inst. Elections

Hans C. Todt, assistant controller, Bristol Laboratories, has been elected president of the Syracuse Control of the Controller Institute of America. Stuart H. Henshall, controller, Sharp & Dohme, was elected secretary at the annual meeting of the organization's Philadelphia Control.

The new treasurer of the Montreal Control of the Institute is Robert W. Wakefield, secretary-treasurer, Ciba Co. Ltd. J. M. Wynn, treasurer, Merck & Co., Ltd., was named a director.

Among the directors named by other local branches of the Institute are: Caroll A. Dolan, secretary, Pro-phy-lactic Brush Co.; Frederic M. Hadley, treasurer, Eli Lilly & Co.; Harry R. Lange, vice-president, Cutter Labs.; Edward E. Lanphere, controller, G. D. Searle & Co.; and Bell C. Sample, chief accountant, Southwestern Drug Corp.

Roche Heads Lever Div.

M. J. Roche has been appointed general manager of the newly-organized promotion and advertising services division of Lever Brothers Co., according to James A. Barnett, consumer relations vice-president. The new unit represents a consolidation of the activities of two divisions—the general advertising service division, headed by Mr. Roche, and the promotion division, which was under the direction of Howard Bloomquist, resigned.

To Represent Perl Mfg.

Canners' Machinery Ltd., with head office in Simcoe, Ontario, has been appointed exclusive agent of Perl Machine Manufacturing Co. for all of Canada.

Hill, V.P., Plax

Warren E. Hill, vice-president of Emhart Mfg. Co., has also been elected executive vice-president of Plax Corp., Emhart's subsidiary.

for MILDER COSMETICS

MAYPON 4 C

A HIGHLY PURIFIED
PROTEIN—FATTY ACID—CONDENSATE

satisfying the Draize-Woodward eye irritation test in all concentrations

ANIONIC • LIME STABLE • HIGHLY SUDSING

Specifications

Form and color	Light tan clear liquid
Specific gravity	1.070 to 1.090
Solids	35 to 37%
pH	6.3 –7.3
Active Ingredients	(approx.) 33 to 35%
Solubility in water	In all proportions
Iron	Less than 20 p.p.m.

Applications

Shampoos

Permanent cold wave solutions

Liquid bath preparations

Cosmetic creams

MAYWOOD CHEMICAL WORKS
MAYWOOD, NEW JERSEY
ESTABLISHED 1895

DR. ABRAHAM BERNSTEIN

In Fair Trade Post

Dr. Abraham Bernstein, formerly research associate of Teachers College, Columbia University, has been appointed director of research for the Bureau of Education on Fair Trade, according to Maurice Mermey, bureau director. He will supervise an expanded program of Bureau studies on the role of fair trade in the economy.

Lilly, A.Ph.A. Hon. Pres.

Eli Lilly, chairman of the board of directors, Eli Lilly & Co., was elected honorary president of the American Pharmaceutical Association at that organization's 100th anniversary convention from August 16-22 at Salt Lake City.

Kessler Returns to N. Y.

Hans Kessler, sales manager of Givaudan Flavors Inc., returned last month from a 4-week visit to Switzerland. While in Europe, he visited the factory of L. Givaudan & Cie, S.A., and discussed problems pertinent to the flavor industries both in the United States and abroad.

Smith Named by McNeil

Charles H. Smith, Jr. has joined McNeil Laboratories in the newly created position of assistant to the vice-president, with responsibilities in the field of industrial engineering. His duties will be principally concerned with materials handling, equipment design and departmental layout.

Addition to Lakeside Plant

Lakeside Laboratories, Inc., has completed plans for an addition to the present building at 1707 E. North Ave., Milwaukee, according to Evan P. Helfaer, president. It will increase the productive capacity of the plant and will serve partly as a warehouse. The addition is expected to be ready in the early Fall.

RALPH A. VIERNO

Appointed by Antell

Ralph A. Vierno has been appointed director of international operations for Charles Antell, Inc.

Tower Returns to Westvaco

Ray C. Tower has returned to Westvaco Chemical division, Food Machinery & Chemical Corp., after a two-year tour of active duty with the U. S. Navy. He has become assistant divisional manager, phosphate sales, with headquarters in New York. He succeeds John Peterson who has been appointed district sales manager at Chicago.

W. Newell Wyatt has resigned as district sales manager at Chicago.

Spec. Libraries Elections

The following officers were elected to the pharmaceutical section of the Special Libraries Association at its recent annual conference in Toronto, Canada: chairman, Mary C. Devereaux librarian, Mead Johnson & Co.; chairman elect, Mrs. Claire K. Schultz, librarian, Sharp & Dohme; secretary, Mildred D. Donohue, librarian, American Cancer Society; and treasurer, Frances M. Stratton, Lederle Laboratories.

JOHN C. WEST

West Named by Hirestra

John C. West, formerly West Coast representative for Endocreme and related products, has been appointed assistant sales manager of Hirestra Laboratories, according to George K. Sargent, Jr., vice-president in charge of sales.

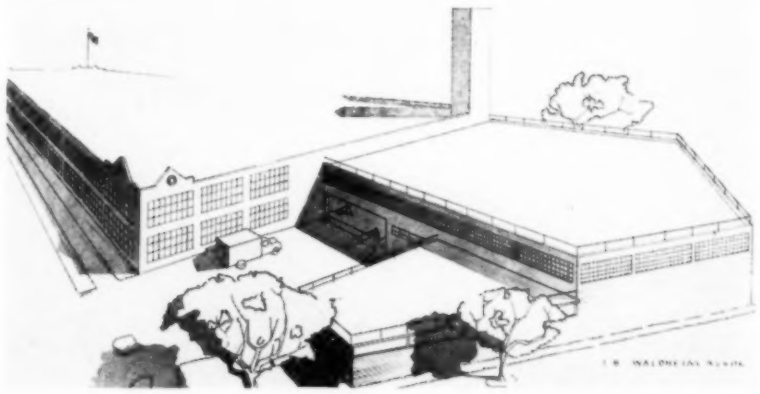
Singer Takes Oak Ridge Course

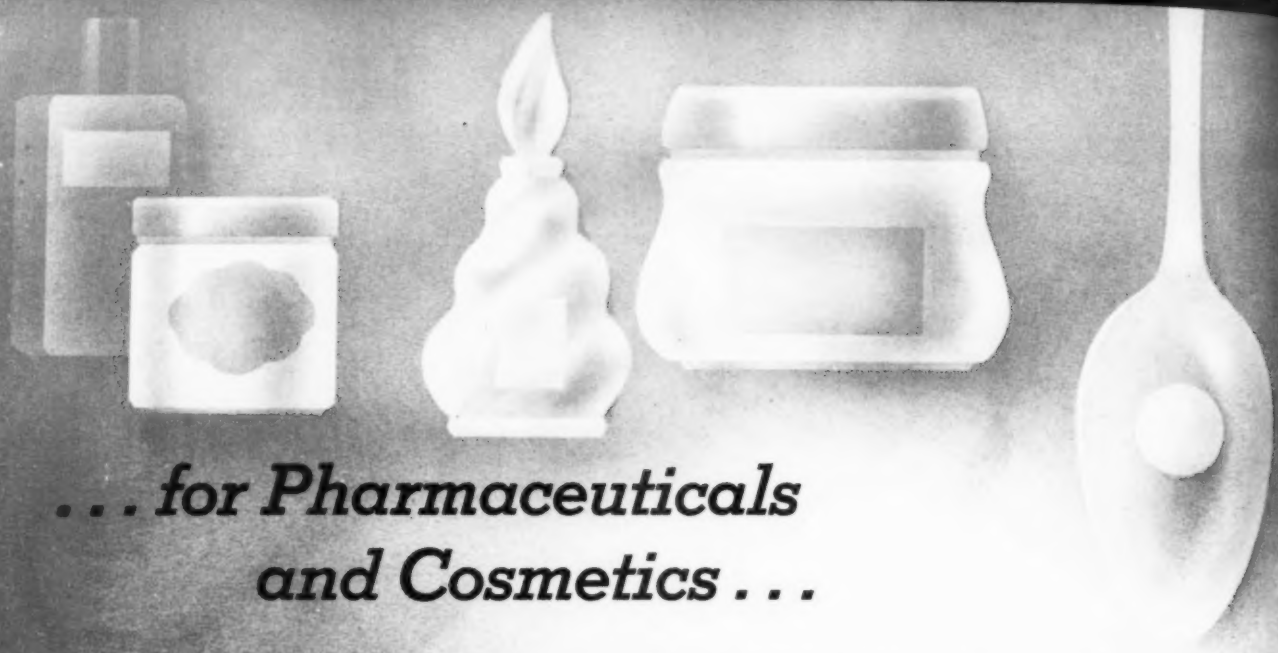
Dr. Frank M. Singer, research associate with the endocrine research section of E. R. Squibb & Sons, recently returned from Oak Ridge, Tenn., where he studied the techniques of using radioisotopes. He was the only representative of a pharmaceutical house in the group of 32 research workers from various parts of the country who were enrolled in this course conducted by the special training division of the Oak Ridge Institute of Nuclear Studies.

Dugan with D & O

James A. Dugan, formerly a sales representative in the chemicals and equipment field, has been appointed to the Dodge & Olcott sales staff in Boston and will work under Ed Wyluda, manager of that office.

Drawing of proposed addition to Lakeside Laboratories. Pharmacological laboratories and warehouse will be on first floor, research and development, on 2nd floor. Building is expected to be ready this Fall.





. . . for Pharmaceuticals and Cosmetics . . .

HEYDEN INTERMEDIATES

- Antibiotics
- Acetylsalicylic Acid
- Benzaldehyde
- Benzilic Acid
- Benzoates
- Bromides
- Creosotes
- Formaldehyde
- Glycerophosphates
- Guaiacols
- Methenamine
- Parasepts®
- Propyl Gallate
- Resorcinol U.S.P.
- Saccharin
- Salicylamide
- Salicylates
- Salicylic Acid
- Tolyl Aldehyde

The high purity and uniformity of these Heyden intermediates are insured by long manufacturing experience and strict quality control. Depend on Heyden as your source for intermediates for pharmaceuticals, cosmetics and kindred products.

FINE HEYDEN CHEMICALS

HEYDEN CHEMICAL CORPORATION

342 Madison Avenue • New York 17, N.Y.

CHICAGO . . . . . CINCINNATI . . . . . DETROIT
PHILADELPHIA . . . PROVIDENCE . . . SAN FRANCISCO

LOUIS AMIC

Amic Honored by France

Louis Amic, industrial perfumer, director general and administrator of Establissements Roure-Bertrand Fils et Justin Dupont, has been named Chevalier of the Legion of Honor with military title for outstanding service and active participation in the Resistance during the last war. This promotion accompanied the presentation of the Croix de Guerre with palm.

Eger Appointed by Merrell

Charles F. Eger has been named assistant purchasing agent of the Wm. S. Merrell Co., according to S. E. Spencer, Jr. His new duties will include added responsibility in purchasing basic chemicals for Merrell, as well as assisting in the administration of department activities.

Wallace on Editorial Bd.

Theodore B. Wallace, medical administrator for Smith, Kline & French Laboratories, has been named to the editorial board of *Antibiotics and Chemotherapy*. He joined SKF in 1933.

Employees Honor Gottscho

Adolph Gottscho, founder and board chairman of Adolph Gottscho, Inc., was honored last month at a testimonial dinner given by company employees on his 75th birthday. It was also the 50th year of the company's operation.

Addresses Cos. Chemists

Archie R. Jackson, director of quality control for the Allen B. Wrisley Co., and president of the Chicago section of the American Society for Quality Control, delivered a talk before the Society of Cosmetic Chemists on September 8. His topic was, "Applying statistical quality control principles to cosmetic manufacturing."

Ross, Geigy Traffic Mgr.

Warren R. Ross has been appointed traffic manager of Geigy Co.

MARYANNE JAMES

Miss James Honored by MMR

Maryanne James, assistant secretary and assistant treasurer of Magnus, Mabee & Reynard, was honored by a luncheon on August 18, marking her 31st year with the company. The occasion was also her birthday.

Andre Delivers 1st Baby

John E. Andre, executive vice-president of American Alcolac Corp., recently delivered his first baby, the patient being his wife. The delivery took place in an ambulance, with siren howling, rushing through Baltimore city traffic to Johns Hopkins Hospital. All three Andres have recovered nicely.

Lab. Moved to Summit, N. J.

The application laboratory of the chemical division of Celanese Corp. of America is being transferred from Newark to Summit, N. J., in a move designed to broaden the scope of its activities, according to David D. Hecht, director.

Cosmetic Rep. in Spain

Jose Colomer, president, Industrias Colomer Ltda., Spain's largest cosmetic manufacturer, expressed a desire, on a recent visit to New York, to be put in contact with producers of plastic bottles who may be interested in establishing manufacturing facilities in Spain on a royalty basis. All financing would be taken care of by Mr. Colomer. Any one interested should communicate with him at Diputacion 260, Barcelona.

Brown Addresses ADACIOM

Dr. John R. Brown, vice-president and director of research for the Lambert Pharmacal Co., division of Lambert Co., delivered a talk at the September 9th luncheon meeting of the Associated Drug and Chemical Industries of Missouri. He discussed his company's development and marketing of the anti-enzyme tooth paste.

Sadow with Lakeside Labs.

Dr. Harvey S. Sadow has been appointed assistant to the scientific director, according to Dr. H. L. Daiell, vice-president and scientific director of Lakeside Laboratories. For the past two years he has been associated with the Central Intelligence Agency in Washington, D. C.

Hooker Appointments

J. H. Babcock, formerly vice-president in charge of development and research, has become vice-president of Hooker Electrochemical Co., and Dr. J. H. Bruun, formerly director of research, has been appointed director of research and development.

Harry Peterson, president of Continental Filling Corp., signing 5-year licensing agreement with Zonite Products Corp. Rudolph J. Hahn, secretary-treasurer, left, and Harris M. McLaughlin, president, represent Zonite. Agreement covers royalties on Continental's use of 2- and 3-phase glass aerosol developments, for which patents pending are controlled by Zonite.

Wellcome Exhibition

The Wellcome research Institution, London, England, held an exhibition, commemorating the centenerry of the birth of Sir Henry Wellcome (1853-1936), during July and August. The exhibition was prepared by the Wellcome Historical Medical Museum and covers the whole period of Wellcome's life.

Dr. Ralph Wyckoff, scientific attache to the American Embassy, opened the exhibit, while Sir Henry Dale, chairman of the Wellcome Trust, a long-time associate of Sir Henry Wellcome, delivered an address.

Howard B. Fonda, senior vice-president of Burroughs Wellcome & Co. (U. S. A.) Inc., attended the opening also.

BIMS Golf Outing

The BIMS of Boston held their midsummer golf outing at the Dedham, Mass., Country and Polo Club on August 13, with over 60 members and guests present. Golf prizes were won by C. F. Karkalitis Jr., Hoffmann-La Roche, Inc.; Gordon Mulligan, J. U. Starkweather Co.; T. J. Conlon, Woonsocket Color & Chemical Co.; R. Allen Gowdy, Stanley Home Products Inc.; Jack I. Vanderwater, R. W. Greeff & Co.; and H. C. Milton, American Cyanamid Co.

Door prizes went to William H. McGrath, Warner-Jenkinson Co.; Emory M. Wright, Boston; Dave W. Schornstein, Dow Chemical Co.; H. S. Kishbaugh, Solvay Process division; Richard I. Swanson, Raffi & Swanson; and a special prize of an outdoor barbecue set, to E. E. Aldrich of the Rexall Drug Co.

William J. Dunney, Sr.

William J. Dunney, Sr., with Ungerer & Co. 18 years, and senior perfumer of that company, died September 6. He was over 70 years old.

His son, William J. Dunney, Jr., was associated with him at Ungerer as a perfumer.

Carlos Austin

Carlos Austin, senior vice-president of Sidney Ross Co., subsidiary of Sterling Drug Inc., died August 3 in Montclair, N. J., at 59 years of age. He became a vice-president of the company in 1939 and a senior vice-president in 1951.

Monahan, Bischoff Advg. Mgr.

I. W. Monahan has been named advertising manager of Ernst Bischoff Co., according to H. G. Terwilliger, president. He has been with the firm since 1943.

Lunsford Richardson

Lunsford Richardson, 61, board chairman of the Vick Chemical Co., died August 10 at his estate, Hillsdale Farm, Greensboro, N. C. He was born in Greensboro, a son of the founder of the Vick enterprise.

Mr. Richardson joined the Vick Co. in 1913 and was made a co-partner with his father and brother. At his father's death in 1919 he became vice-president of the firm and was elected president in 1929. He had been board chairman since 1938.

Surviving are his wife, Mrs. Margaret Blakeney Richardson; one son, four daughters, a brother and three sisters.

LUNSFORD RICHARDSON

Gustavus A. Pfeiffer

Gustavus A. Pfeiffer, retired chairman of the board of William R. Warner & Co., Inc., and retired president of Richard Hudnut, died August 22, in Norwalk, Conn. Hospital at the age of 81.

In 1894, Mr. Pfeiffer joined his late brother, Paul M. Pfeiffer, in the operation of a drug store in Parkersburg, Iowa. Later, in 1901, the brothers, along with their eldest brother, Henry, launched the Pfeiffer Chemical Company in St. Louis. Seven years afterwards, with expansion through the acquisition of other pharmaceutical companies, Mr. Pfeiffer became vice-president and treasurer of the Warner concern.

He resigned as president of Warner in 1944 to become chairman of the board, a post he held until December, 1945, when ill health forced retirement.

Mr. Pfeiffer is survived by a brother, Ernest, of Pasadena, Calif. His wife died in 1948.

Albert A. Teeter

Albert A. Teeter, retired senior vice-president of Charles Pfizer & Co., Inc., died September 3 at his home on Ridge Road after a long illness. He was 65 years old on the day of his death.

Mr. Teeter served in both World Wars as a captain in the Army and was a member of an advisory committee of the War Production Board from 1942 to 1946. He was a former chairman of the board of the Industrial Molasses Sales Co.

He worked for a number of chemical manufacturing firms before joining the Pfizer company in 1915, where he remained, except for terms of Army service, until his retirement in January, 1950.

Mr. Teeter was a man of many interests, one of them, photography. Graduated from the New York Institute of Photography in 1935, he was an Associate of the Photographic Society of America and of the Royal Photographic Society of Great Britain. Many of his pictures were hung in salons, and he was a judge in major contests.

He also raised rare birds and at times had as many as 1,000 birds of different species in aviaries on his estate.

Surviving are his wife, Mrs. Agnes Sullivan Teeter; two sons, John O. and Albert A. Teeter, Jr.; a daughter, Anne Marie Teeter; his parents, Mr. and Mrs. David A. Teeter; and a sister, Mrs. Elmer D. Cutting.

Edward J. Walker

Edward J. Walker, formerly assistant manager in charge of prescription ware sales in the glass container division of Owens - Illinois Glass Co., died August 21, in Orlando, Fla., of a heart ailment. He retired a year ago and had been living in Winter Park, a suburb of Orlando. Surviving are his wife, Hazel; brother, Sinclair; daughter, Mrs. Robert S. Botsford; and two sisters, Mrs. Jack McCree and Mrs. George Raeburn.

Edward Trippe

Edward Trippe, well-known in the essential oil, pharmaceutical and chemical industries in Philadelphia and New York, until his retirement in 1951, died last month at Stanford University Hospital, Palo Alto, Calif. Residing in Woodbury, N. J., he was a member of the Philadelphia Drug Club and the Chesapeake Yacht Club. He is survived by his widow; three sons, Edward R., Augustus S., and James; two daughters; a brother and a sister.

Today's Modern Sampler

Cross Swing Sifter Sampler

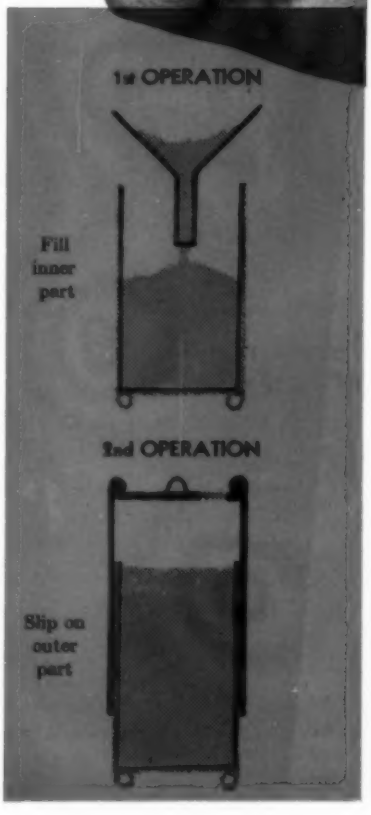
So good for sales! So easy to fill!

In the face of current selling conditions, distribution of product samples is rapidly becoming a necessity. And these Cross round miniatures provide the modern answer for the perfect sampling container.

Dressed as an exact replica of your full size container, patented Cross Swing Sifter Samplers are sure-fire for sampling all sorts of powders such as cosmetics, food, drugs, pharmaceuticals and anything else that can be dispensed through a shaker or a sifter.

LOW COST FILLING

Almost any standard filling equipment can be used to fill Cross Samplers. Just fill the inner section, and then slip the outer part over it. Then a simple twist of the top, and your product flows freely.



Ask for a representative to show you samples and discuss your problems.

CROSS PAPER PRODUCTS CORP.

4377 Bronx Boulevard New York 66, New York

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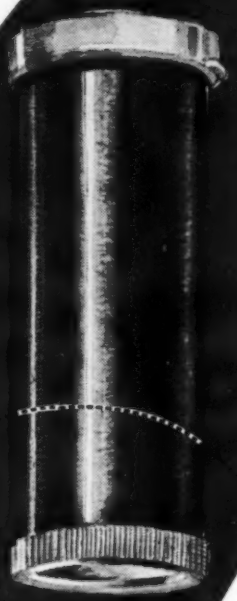
glamorize and merchandise

your solid cologne
solid toilet water
facial and hand creams
deodorants
after shave lotions

with the **NEW KING SIZE**
1 OUNCE CAPACITY



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Swivelpak

PROPEL-RITE
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CONTAINER

IN GLORIOUS COLORS AND COMBINATIONS

no moulding required... product can be poured directly into container... elliminates necessity for costly foil wrapping.

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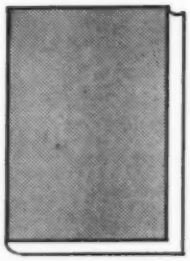
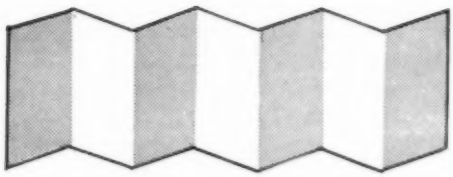
137 WELLINGTON ST., WEST, TORONTO, CANADA

PAT. PEND.



Trade Literature



Spectrophotometry

What Every Executive Should Know About Spectrophotometry is the title of a 14-page booklet issued by Beckman Instruments, Inc., South Pasadena, Calif. Presenting for the first time the whole story of spectrophotometry—a technique for analyzing substances by the amount of light they absorb—the booklet presents in layman's language just what a spectrophotometer is, how it works and what to look for in selecting an instrument for any of countless industrial and laboratory uses.

Nardenized Oils

Nardenized Oils—Practical Results—is the title of a 64-page booklet issued by N. V. Chemische Fabriek "Naarden," Holland. Presented in the booklet are the results of two years of experiments with these oils which, in most instances, are quite different from the original oils. Very interesting information is presented.

Zinc Nitrate

J. T. Baker Chemical Co., Phillipsburg, N. J., has issued Product Data Bulletin No. 25320 entitled Zinc Nitrate, Technical, crystal.

Aminohydroxy Compounds

Commercial Solvents Corporation, 260 Madison Ave., New York 16, has issued Technical Data Sheet No. 18 entitled The Aminohydroxy Compounds. Chemical and physical properties on five of these compounds are given together with many suggested uses showing formulations. The company has also issued Technical Data Sheet No. 17 entitled Benzyltrimethylammonium Chloride.

pH Equipment

A four-page folder on portable pH meters (Bulletin 322-63) designed to simplify the choice of pH equipment, has been issued by Beckman Instruments, South Pasadena, Calif. Salient performance features and pictures distinguish the four pH meters in the series. They include a highly accurate instrument for laboratory and research studies, a line-operated model for routine measurements in the control laboratory, and two lightweight portables for plant and field applications.

Spray Dryers

Foster D. Snell, 29 West 15 St., New York 11, has issued an 8-page booklet entitled Snell Packaged Unit Spray Dryers—a complete revision of earlier editions brought out in 1951 and 1952. Diagrams are shown on the conventional method of drying products compared with the method employed when using a spray dryer.

Rutin and Flavinoids

New Applications of Rutin and Related Flavinoids is the title of a four-page folder issued by Karl B. Rosen & Co., 120 Liberty St., New York 6. Description of rutin as a nutritive supplement in the geriatric field is presented as well as the addition of rutin to the routine mineral-vitamin prenatal combinations. A new flavinoid, quercetin, is discussed as to its relationship to rutin and its apparent advantages.

Macrocyclic Oxalactones

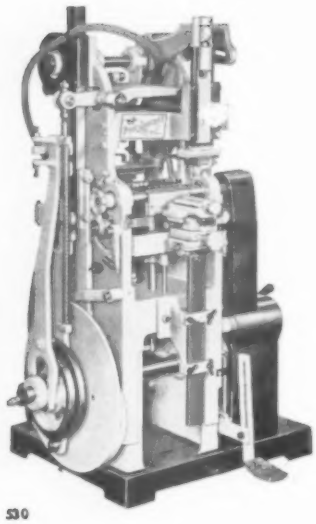
The Research Department of Polak & Schwarz, Hilversum, Holland, has issued a reprint of a paper entitled Macrocyclic Oxalactones, by M. G. J. Beets and W. Meerburg, of the company.

Ethylene Amines

Carbide & Carbide Chemicals Company, 30 East 42 St., New York 17, has issued Technical Bulletin F-8163, a four-page folder on the ethylene amines—ethylene diamine, diethyl triamine, triethyl tetramine, and tetraethyl petamine. Physical, chemical, and physiological properties; specifications and shipping data; and application are included.

Ultrawets in Shampoos

The Atlantic Refining Company, 260 South Broad St., Philadelphia 1, has issued Technical Bulletin No. 53A-1 entitled Ultrawets in Shampoos. The uses of these products are illustrated with formulas.



530

HOW? By utilizing *vacuum* in a critical stage of your packaging.

All the care lavished on selecting appropriate containers, perfect closures and attractive labels for carefully made products,—the components that reflect Quality, can be nullified by neglecting precision labeling.

When your product meets the eye of the buyer, *every* label should be exactly in its proper position,—in intimate *permanent* contact with its container. This is *mechanically assured* by use of vacuum to do the label-handling, guaranteeing positive label-feeding, uniform adhesion and accurate label placement.

To do this, you need a PONY LABELRITE®

Why not ask for proof?

NEW JERSEY MACHINE *Corporation*

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Management Forum

by Francis Chilson
INDUSTRIAL CONSULTANT

You Can't Beat the Irish

During the troubled times of 1848 shortly after the Great Potato Famine in Ireland, which almost depopulated the country either by starvation or emigration, nine young Irishmen were convicted of treason against Queen Victoria and sentenced to death. The names of the condemned men were: Thomas Meagher, Terence McManus, Michael Ireland, Richard O'Gorman, John Mitchell, Thomas McGee, Charles Duffy, Patrick Donohue and Morris Lyene.

Tom Meagher had been chosen to speak in defence of them all. He said to the Trial Judge: "My Lord, this is our first offense but not our last. If you will be easy with us this once, we promise on our word as gentlemen to try to do better next time. And the next time, your Honor, we won't be fools enough to get caught."

The affronted judge sentenced them all to be hanged by the neck. But such was the protest from all over the world that Queen Victoria commuted the sentence of the nine youths. The entire lot were ordered transported to the distant, savage penal colonies of wild Australia.

In 1871 Sir Charles Duffy was elected Prime Minister of the Australian province of Victoria. Later Queen Victoria discovered to her utter amazement that this Charles Duffy, on whom she had conferred knighthood, was the very same Charles Duffy who had been convicted of high treason and shipped as a convict to Australia twenty-three years before. The success of the man aroused her interest and she requested that the records of the other men be investigated. This is what she discovered: McGee was President of the Council for the Dominion of Canada. Mitchell was a prominent New York politician whose son, John Purroy Mitchell, became the Mayor of New York. Morris Lyene was elected Attorney-General of Australia and was later succeeded in that office by Michael Ireland. McManus and Donohue were Brigadier-Generals in the United States Army. Meagher was the Governor of Montana and O'Gorman was the Governor-General of Newfoundland.

All of this points up the fact that Irishmen succeed everywhere in the world except in Ireland. In Ireland one man is as good as another if not better, bedad! In Ireland, as I discovered last year, there is not one political party or two or three; there is a political party in Ireland for every Irishman in the Ould Sod.

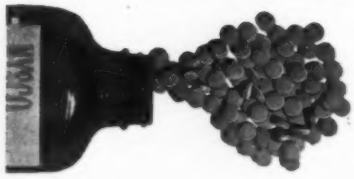
Chemical Control

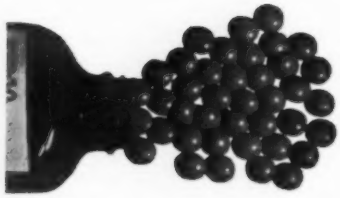
The cost of quality control of drug and cosmetic products is increasing by leaps and bounds. Part of this is due to tightening government regulations and part of it is the outgrowth of the Massengill scare, which gave everybody the jitters. Time was when a manufacturing foreman who was neither a pharmacist nor a chemist stuck his finger in the batch, sniffed it, tasted it, rubbed it on the back of his hand and pronounced the product OK. Now we analyze it, assay it, bio-assay it, waltz with it, dance a jig with it, photograph it and psychoanalyze it before we decide that the product is fit for human consumption, which, in a good many cases it isn't anyway. And in most cases Joe Doaks, who stuck his elbow in the tub of ointment, or smeared a little cold cream on the back of his hand, knew whether the product was right or not long before the chemists applied the stethoscope to it. And with it all are records, records, records!

All over the industry the Control Department is generally known as the "Goddamned Control Department." The Marketing Department raises hell with the Production Department because of its failure to turn out enough stuff on time, and the Production Department howls in helpless fury because the Control Department finds it necessary to spend five or ten days stuffing samples of the stuff up guinea pigs' backsides until they can whistle "God Save the King!"

It is within my experience in the industry that many prominent pharmaceutical and cosmetic firms did no control work on incoming raw materials at all; they

One Press . . . Four Days . . . 6,000,000 Tablets





Nysco Laboratories, Inc., Long Island City, N. Y., was recently faced with an emergency order for 6,000,000 ferrous sulfate tablets. Only one of its eight Stokes Model BB-2 tabletting presses could be spared for the job . . . yet the press produced the prescribed quantity in just four days . . . without interrupting regular production schedules.

Usual output at Nysco Laboratories, Inc. is around 20,000,000 standard preparation tablets per week, produced from a stock of over 170 sets of Stokes punches and dies. Over 3,000 different preparations are made by this private formula manufacturer for the Armed Services, hospitals, wholesalers and exporters.

Stokes has the right machines and proved techniques for practical and profitable tabletting manufacture. Easily adjusted or adapted for different tablet sizes, shapes, pressures and speeds, Stokes tabletting presses can be operated at low cost, high output, and maximum efficiency.

Pharmaceutical manufacturers may consult with the Stokes Advisory Service and Stokes field engineers, without obligation, on such problems as tablet formulae, punch and die design, and improved manufacturing and operating procedures.

Send for Catalog No. 800 "Stokes Tabletting Presses", which pictures and describes tabletting processes, and for Catalog No. 600, "Stokes Pharmaceutical Equipment", which describes the complete line of Stokes pharmaceutical machinery now available.

F. J. Stokes Machine Company
Philadelphia 20, Pa.

STOKES

STOKES MAKES: High Vacuum Equipment, Vacuum Pumps and Gages/Industrial Tabletting, Powder Metal and Plastics Molding Presses/Pharmaceutical Equipment

confined their attentions to a more or less casual examination of finished products. Some of these outfits, doing businesses of several million dollars a year, had only one or two control chemists each. Now they have dozens of them. In some organizations they have far more control chemists than they have research men. And their products continue to be picked up by the FDA just the same. Some years ago I wrote a series of pieces on the necessity for the establishment of certification laboratories so that ordinary chemicals could be certified, thus eliminating the need for repeating the assays already made by the manufacturers of the chemicals. But no dice.

Mind you, I am not arguing against the need for practical quality control of incoming materials and finished products. But when I find outfits running detailed U.S.P. tests on products that are not sold as U.S.P. products, I think we have gone far afield. A good weighmaster is a prime necessity in every plant. The identity and weight of batch ingredients should be carefully checked and double-checked. I think that compounding of batches should be double-checked. But when a finished product consists of simple, non-toxic ingredients I will be damned if I see the necessity for running toxicity tests on materials that are known to be non-toxic.

The work done by control chemists is of enormous value. I know of cases where their work saved their firms hundreds of thousands of dollars in lawsuits. I know of cases where their work discovered errors of omission and commission in compounding that might have been disastrous if the products had been released. But there is a practical limit to everything and in our control work we have gone far beyond it. I am reminded of a case in which I discovered that inventories of the principal raw materials were warehoused in five widely separated buildings because the firm had experienced a disastrous fire forty-five years before. The cost of warehousing and handling such widely scattered inventories was incalculably greater than the loss sustained in the fire (which was met by insurance anyway).

All I am asking for in control work is common sense. Regardless of how extensive control may be, your product may go wrong because of a rare contaminant, which even the most elaborate control system would never have detected, because every control system searches only for the properties that the product is supposed to have and will never detect the contaminants that might accidentally have gotten into the raw materials or the finished product, unless these contaminants are of such a nature as to affect the physical or chemical properties of the other ingredients.

Gang Presses

In traveling around the industry I have often been amazed that manufacturers of large tablets such as effervescent tablets continue to use single punch presses. A few have tried rotary presses and I have seen effervescent tablets produced and packaged directly from rotary presses. Proponents of the single punch presses for such products claim that no matter how much you slow down a rotary press it is not possible on such presses to produce tablets with the same elegant finish that can be secured through the use of single punch presses. I wonder why gang presses have not been used for this purpose as they have been used for making rouge cakes. I have seen as many as 12 cakes of rouge made with a single stroke of the press. Such presses were slow in motion and high in capacity. They were toggle presses so designed that the cam controlling the motion of the punches permitted a momentary dwell just before the final maximum pressure was applied and this motionless period permitted the final residuum of air to escape and the tablets so produced had a fine, smooth finish.

Binders and Disintegrators

My friend Jim Hall of the Algin Corporation, 24 State Street, New York 4, N. Y., called my attention to new binding, disintegrating and lubricating agents made by his company for use in tablet manufacture. Jim says:

"The problem of making tablets which will combine a sufficient degree of firmness to eliminate capping and chipping with rapid disintegrating properties has always been a difficult one. Thus, when a gum such as acacia is used as a binder and starch is used as a disintegrant a high pressure is needed on the punches to make a firm tablet, while at the same time a large percentage of starch must be used as a disintegrant. The metallic stearate generally used as a lubricant to prevent capping tends to 'waterproof' the disintegrant which greatly retard disintegration because the water cannot penetrate the disintegrant (starch) quickly enough to produce the rapid disintegration which is so highly desirable. The use of these conventional ingredients thus makes it difficult to manufacture a tablet which will not be subject to capping or chipping and at the same time will disintegrate rapidly.

"Superior results in all respects can now be obtained under a radically new procedure involving the use of an alginic disintegrant and a carrageenin binder (both products being derivatives of refined edible seaweed colloids) coupled with a glyceryl mono stearate such as Aldo 33, as a lubricant. The use of these ingredients under the procedure outlined below has the following advantages:

"1—Much lower punch pressure required to make a firm tablet.

"2—Carrageenin binder does not require cooking but is cold water soluble under agitation.

"3—Sugar can be used freely in combination with the carrageenin binder because contrarily to other binders the carrageenin binder will inhibit coarse sugar crystals and prevent stickiness.

"4—The alginic disintegrant has outstanding disintegrating properties in comparison with starch, a much smaller percentage producing extremely rapid disintegration.

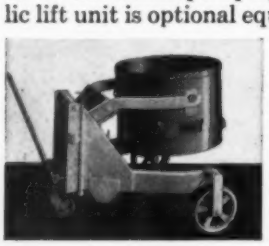
IN MIXING EQUIPMENT

DAY means longer life span

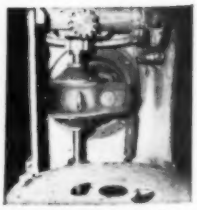
DAY 100-gal. gearless type pony mixer at Eli Lilly & Co., Indianapolis, Indiana

DAY combines rugged construction with precision engineering. That's why DAY Pony Mixers are delivering *extra* years of trouble-free, economical operation in plant after plant. DAY features result in higher production at a lower cost, protect the quality and uniformity of your product. An important feature is the interchangeable can unit—eliminates delay between batches. Lift truck with hand pump hydraulic lift unit is optional equipment. DAY planetary mixing action plus agitator blade contouring delivers radial and lifting mixing action over depth of can. DAY rugged construction is unique. A one-piece heavy cast iron frame assures absolute rigidity, quiet operation. Mixers are driven by time-tested internally geared head motors through roller chain and sprockets enclosed in dust tight guards, exclusive with DAY. Whatever your requirements, there's a dependable DAY pony mixer engineered to do your job — better — more economically. For complete information, call your nearest J. H. Day field engineer, or write direct for Bulletin 500.

RUGGED CONSTRUCTION



INTERCHANGEABLE CAN



DEPENDABLE DRIVE

FOUNDED 1887

when you buy **DAY** *you buy dependability*

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INCORPORATED

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PRODUCERS OF QUALITY EQUIPMENT FOR BAKING • PAINT & VARNISH • CHEMICAL FOOD • RUBBER • PHARMACEUTICAL • COSMETICS • PAPER & PULP • EXPLOSIVES CERAMICS • CANDY • SOAP • SUGAR • MILK PRODUCTS • OTHER MAJOR INDUSTRIES

"5—Aldo 33 combines excellent lubricating qualities with permeability to water.

"6—Much lower pressure and quieter running will materially lengthen the life of the presses.

"7—Economy in use, because higher cost per pound of ingredients is more than offset by the smaller quantities required and by the virtual elimination of the expense of reworking rejects caused by chipping and capping.

"Following is the tested formula for A.P.C. tablets. Disintegration Time: Approximately 15 seconds:

"*INGREDIENTS:*

158 lbs. 10 per cent Aspirin (contains 10 per cent starch)
90 lbs. Phenacetin
18 lbs. Caffeine
11 oz. Carrageenin binder
6 lbs. Sugar
1½ lbs. Aldo 33
1½ lbs. Alginic disintegrant

"PROCEDURE:

"The Carrageenin binder is put in solution in 3 gallons of water with the sugar added.

"The phenacetin and caffeine are mixed dry and to this mix is added the above solution. After thorough mixing, the entire solution is dried and graulated.

"The above dry mixture is then blended with the aspirin which comes in a granulated form.

"The alginic disintegrant and the Aldo 33 are introduced into the blend of all the above ingredients just before tableting.

"Be sure and lower the pressure on the punches. It will require a little experimenting to get as low a pressure as possible and still have a firm tablet.

"The Carrageenin binder, alginic disintegrant and Aldo 33 must be used in combination to get the best results. They can be used in any type of tablet.

"ALGIN will be pleased to furnish samples of the above materials or send samples of A.P.C. tablets made according to this formula for your inspection."

Plastic Ampules

Some years ago in a talk before the Parenteral Drug Association I mentioned the fact that if anyone could devise a way of sterilizing heat-sealable plastics such as polyethylene, ampules could be made and filled on machines conventionally used for the manufacture of soft gelatine capsules. At that time the idea was so nebulous and seemingly so remote from accomplishment that I mentioned it only to get a rise out of my friend Ben Dennis. (I got the rise all right.) Apparently my friends who were fooling with the idea stuck with it. I happened to read an account in the Wall Street Journal about a week ago that the G. E. Laboratories have discovered that if polyethylene film is bombarded with electrons it can be made to resist sterilization temperatures without losing its form or essential properties. The article mentioned that prominent pharmaceutical houses are very much interested in the project. (Ben Dennis please note.)

The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

Automatic Cellulose Banding Machine

Economic Machinery Company, Worcester, Massachusetts, Division of Geo. J. Meyer Manufacturing Co., announces the availability of an electric eye mechanism for their new Automatic Cellulose Banding Machine whenever the use of printed instead of plain bands is required. The Machine is also available with bottle spotting mechanism when a printed band is to be accurately located on the bottle with respect to the labels on the bottle.

With these additions, the new Banding Machine becomes universal in application. It can be changed from printed bands to plain bands by simply pressing a button.

With the World Automatic Cellulose Banding Machine, any container that is normally fed through automatic cappers, fillers or labelers may be automatically banded at packaging line speeds with consequent substantial improvement in production, uniformity of banding and economy of handling.

Complete information on this Automatic Bander and how it operates may be obtained from the Economic Machinery Company.

Particle Size Distribution

A newly designed instrument which quickly and accurately determines the particle size distribution of powdered materials has just been placed in production by the Sharples Corporation Research Laboratories, Bridgeport, Pa.

Known as the Sharples Micromerograph, this high precision instrument will be of unusual interest to numerous industries producing or handling such materials as cements, pigments, metal powders, abrasives, ceramics, drugs, insecticides, cosmetics, and hundreds of others. Since the important characteristics of a powder are closely related to the particle size distribution of that powder, an accurate, simple and quick means of making a particle size distribution analysis is of the greatest importance, not only as a research aid, but in production and quality control.

The Sharples Micromerograph utilizes a technique in which powder particles are dispersed in air and are allowed to settle under the action of gravity through a tube onto a servo-electronic balance. The balance yields a continuous record of the weight of powder settled, plotted against time. Through the application of Stokes' Law of Fall, a particle size distribution curve is obtained.

Designed and perfected to eliminate the disadvantages of existing methods of particle size distribution

#1
Non-rolling, extra-depth Bakelite cap; thick flange rubber bulb; Saftee ball glass.

#3
Regular plastic cap; thin flange rubber bulb; semi-blunt glass.

#4
Metal cap; oil-resisting Amekine synthetic rubber bulb; blunt glass.

#5
Small size plastic cap; midget rubber bulb; regular straight glass

New Perfection

DROPPING PARTS

"Repeat-Sale Insurance" for Liquid Preparations

The New Perfection line of functionally designed dropping parts gives satisfaction where satisfaction counts—in the hands of the user. To make sure the customer's first reaction to your product is 100% favorable, specify New Perfection. Our rigid inspection system assures the cleanliness and uniform high quality of every shipment.

New Perfection dropping parts will fit your bottle or can be furnished in combination with our Modernistic bottles in Amber, Blue, Green or Clear glass. Bottle sizes—2 cc, ⅛, ¼, ½, 1 and 2 oz.

NEW PERFECTION DROPPER GLASSES

CALIBRATED

IN COLOR

This inexpensive extra adds welcome convenience to the use of your product. Accurate calibration in any color marks the specific dosage indicated. Your firm name or trade-mark may also be imprinted.

#2
Non-rolling, extra-depth Bakelite cap; thick flange rubber bulb; special bent glass (CALIBRATED IN COLOR).

Improved bottle shape. Designed to lie flat for convenient labeling. Front provides ample label space.

IN ADDITION to NATURAL RUBBER BULBS for GENERAL USES, WE CAN ALSO SUPPLY

AMEKINE (OIL-RESISTING) Synthetic Rubber Bulbs

which are recommended for use with oil preparations, such as nose and ear drops and vitamin products. Even after long exposure to oil, Amekine closely retains its original shape and functions perfectly.

PENNSYLVANIA GLASS PRODUCTS CO. INC.

"Glass Goods of the Better Kind"

430 N. CRAIG ST. • PITTSBURGH (13), PA., U.S.A.

analysis, the Sharples Micromerograph provides continuous data, and reduces the time required for a test run to as little as fifteen minutes. The relatively large sample used, (about 1/10 gm), containing billions of discrete particles, eliminates the large statistical errors found in many other methods.

Other advantages claimed for this instrument include a wide size range, attention-free operation, simple sample preparation, and positive deagglomeration of the powder. Furthermore, because of simplicity of principle and operation, technical and skill is not required of the operator.

Housed in one complete, integrated unit, the Micromerograph is mounted on a wall or column, and requires floor space of only 13 inches by 23 inches, and a height of 8½ feet. A cylinder of nitrogen is required; this compressed gas is used to inject the powder sample into the sedimentation tube through the deagglomerator.

Further information and complete details will be supplied promptly if requests are addressed to the Sharples Corporation Research Laboratories, 424 W. Fourth St., Bridgeport, Pa.

Thrifty Labeler

Prompted by the wide interest which their new Thrifty Labeling Machine has aroused in the trade, the Package Machinery Company has appointed a selected group of well-established agents throughout the country. Working in cooperation with the Package Machinery Company's staff, these organizations will cover sales and service of the Thrifty Labeler in the following territories:

MRM Company, Inc., 191 Berry St., Brooklyn 11, N. Y., for metropolitan New York, New Jersey, metropolitan Philadelphia and Eastern Pennsylvania.

T. R. Lewis Company, 178 Thorndike St., Cambridge, Mass., for Maine, New Hampshire, Rhode Island and Eastern Massachusetts.

Alloy Engineering & Sales Co., 1570 Northside Drive, N. W., Atlanta, Ga., for Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee and Kentucky.

Kruse Packaging Machinery Co., 5807 W. North St., Chicago, Ill., for Michigan, Wisconsin, Indiana, Minnesota and Northern Illinois.

Packaging Equipment, Inc., 2013 Olive St., St. Louis, Mo., for Missouri, Iowa, Kansas and Southern Illinois.

E. A. Wagner, 2013½ Young St., Dallas, Tex., for Texas, Oklahoma, Arkansas and Louisiana.

Hoskins Brokerage, 67 Wazee Market, Denver, Col., for Colorado, South Dakota, Nebraska, New Mexico, Arizona, Utah, Wyoming and Idaho.

Duncan Equipment Co., 506 Broadway, Seattle, Wash., for Washington, Oregon and the Province of British Columbia; also for Northern Idaho.

Peter D. Bowley & Associates, 210 Mississippi St., San Francisco, Cal., for the state of California.

Package Machinery Company's New York office at 30 Church Street will handle the Thrifty Labeler in Maryland, Delaware and the District of Columbia.

Western Massachusetts, Vermont, Connecticut and Eastern New York will be handled by the Package Machinery Company's home office in Springfield, Mass.; and the Cleveland office at 1009 Carnegie Hall Building will handle the business in Western New York, Western Pennsylvania, West Virginia and Ohio.

The Thrifty Labeler is a quickly-adjustable straight-line machine with speeds of up to 120 containers a minute. It will label a wide range of containers—from a gallon jug to a 4-ounce bottle.

Revolutionary Vinyl Plastic Collapsible Tube

A revolutionary vinyl plastic collapsible tube for packaging such products as tooth paste, shaving cream and oil paints—and so strong that a 200 pound man can stand on it without rupturing the sides or seams—has been developed by Wallace Container Co., Los Angeles.

The new product is made from one of B. F. Goodrich Chemical Company's Geon vinyl resins and looms in the packaging field as an economical replacement for conventional metal tubes. It weighs about one-third as much as lead containers. Wallace Container demonstrated the filling operation of the plastic tubes to the public for the first time in BFG Chemical's booth at the 22nd A.M.A. National Packaging Exposition, Navy Pier, Chicago, April 20-23. Sun tan lotion was packaged at the show on a regular tube-filling machine equipped with a simple adapter to heat-seal the bottoms.

Cost of the new tube runs approximately the same as tin, lead and aluminum containers. Economic savings, according to Wallace, comes from non-breakability in handling and shipping. Tubes will not burst from careless treatment or from expansion of contents caused by temperature change.

The Geon vinyl tube can be made transparent, opaque, or in any color, depending on the product to be packaged. The label is printed directly on the plastic surface. Composition of the plastic can be varied to provide maximum resistance to chemicals, oils and greases contained in the packaged product. Patent coverage on the tube and all steps in the process of making it have been applied for by Wallace Container Company.

Over the past two years, according to Wallace, the collapsible tubes have been tested for packaging practically every item that is sold in a drugstore. Most of these cause no trouble because of the resistance of Geon vinyl plastic to oils, greases and many chemicals.

Other advantages of the vinyl plastic tubes are:

1. Leakproofness: They hold liquids better than conventional tubes because Wallace Containers are hermetically sealed at both ends.

These All-Star Valve Features

win preference and build sales for pressurized products

★

- ★ ***Self-cleaning***—of scum and anything else that might cause internal clogging.
- ★ ***Rugged construction*** — long life with smooth, trouble-free operation.
- ★ ***High corrosion resistance***—all metal parts heavily tinned.
- ★ ***Valve loading***—of both product and propellent through the valve itself. No need of expensive refrigeration.
- ★ ***Wide adaptability***—for spray *and* foam—and for use on Crown or seamless cans or *any* type of aerosol container.
- ★ ***Decorative latitude*** — practically without limit.

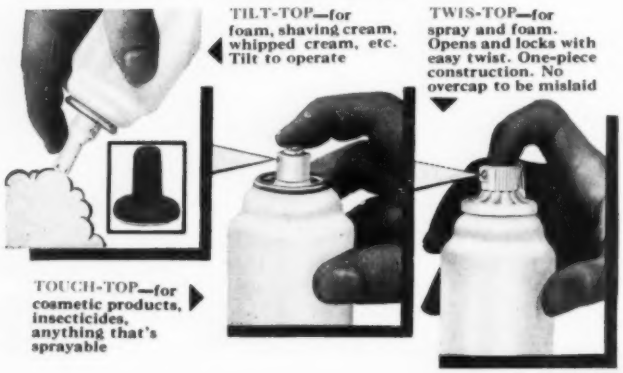
You get them all — *and more besides* in

Pres-O

The Original Cosmetic *Aerosol Valve*

★ ★ ★ ★ ★

These beautiful *Pres-O Tops* add the crowning touch


TILT-TOP—for foam, shaving cream, whipped cream, etc. Tilt to operate
TWIS-TOP—for spray and foam. Opens and locks with easy twist. One-piece construction. No overcap to be mislaid
TOUCH-TOP—for cosmetic products, insecticides, anything that's sprayable

Millions of successful packages have been sold with Pres-O Valves

Individual styling— to suit *your* product and enhance *your* package

Our engineers are ready to work with you.

INVESTIGATE...!

There is no subtitute for satisfaction

OIL EQUIPMENT

Laboratories, Inc.

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2. Ruggedness: The vinyl plastic tubes can withstand impact and rough handling.
3. Product visibility: The tubes can be supplied either transparent or opaque.
4. Unlimited colors: Wallace Containers can be supplied in any color and can be printed up to four colors.
5. Long storage life: The tubes will not deteriorate in storage. They will not oxidize or rust.
6. Low temperature flexibility: Special formulations of the plastic enable flexibility to be maintained as low as −65 degrees F.
7. Wrinkleproof: This feature maintains the advertising value of the package.
8. Hot filling possible: Wallace containers stand up to 250 degrees F. before softening.
9. Non-toxic: The plastic tubes will not impart taste to product.
10. Sterilization: The containers can be boiled in water for sterilization if necessary.
11. Reduced packaging costs:
    (1) Because of the ruggedness of the Wallace tube, eternal packaging, such as individual paper cartons and sleeves, can be eliminated. This saves excessive materials and labor outlays.
    (2) Shipping weight is substantially less than other type containers.
    (3) Leakage and breakage losses are minimized.
        a. Losses of product.
        b. Replacement cost.
    (4) Higher production rates are possible in the filling operation used with the Wallace tube.

In addition to Wallace's testing program the tubes are undergoing extensive tests conducted by Tripplett and Barton, Inc. an independent testing laboratory, and are currently being evaluated by many leading pharmaceutical houses.

Wallace Container Company plans to merchandise direct to all manufacturers making products which lend themselves to tube packaging. Wallace will make the tubes, print the labels on them, and then ship them to the customer with the tubes open at the bottom. The customer fills them using his regular tube-filling equipment and heat seals the bottom on a special adaptor supplied by Wallace.

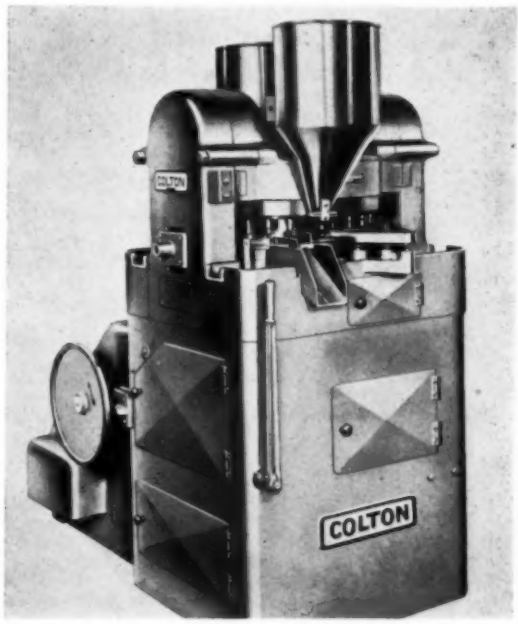
In one big market for the new product—packing of oil paints and latex-based collors—field evaluation is largely completed and tubes are gaining rapid acceptance. Other fields of application, such as the packaging of lubricants, medicinals and pharmaceutical products, are expected to develop quickly in the next few months as manufacturers round out their test programs.

B. F. Goodrich Chemical Company's Geon vinyl resin, the base material used in making the tube, is widely used in other packaging applications requiring non-toxicity and resistance to grease, oils and chemicals. These include food packaging film, cap liners, coatings for drums, and tubing for intervenous feeding.

Tablet Press

A unique tableting machine that provides an unprecedented combination of tablet size and production capacity has been introduced by Arthur Colton Company.

The new machine, known as the Colton No. 260 Rotary Twin Tablet Press has been engineered specifically for the high speed production of large size tablets and, in the two models available, offers capac-



ities of 1750 and 2300 tablets a minute, respectively, an important improvement over the capacities hitherto available in large size tablet presses.

In actual commercial production of well-known, big volume, large tablets, Colton Model 260 has proved conspicuously successful, maintaining continuous, high speed production without any sacrifice of quality or uniformity in the finished tablets, these being also consistently free from capping and similar defects sometimes associated with high speed production. This success at high speeds is partly due to a unique operating feature of the No. 260 which eliminates hammering action on the fill and employs, instead, a long dwell pressing action which squeezes out the air content and produces a uniformly compacted, well integrated, finely finished tablet.

Colton No. 260 is available in two models, both rotary twins: Model 260-25, maximum tablet diameter 1-3/16″, maximum fill 1-3/8″, maximum production 1750 tablets a minute; and Model 260-33, maximum tablet diameter 15/16″, maximum fill 1-3/8″, maximum production 2300 tablets a minute. Maximum pressure in both presses is 20,000 lbs. Inquiries should be accompanied by specification information for study by Colton Engineering Department, Detroit, Mich.

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Readers' Questions

Liquid Leg Makeup: *It sounds strange, but we can use a formula for a good adhesive leg makeup. I wonder if you would be able to help us. Renton.*

I think the following is in line with what you want:

Precipitated chalk	**10.0 per cent**
Talc	**5.0 " "**
Titanium dioxide	**3.0 " "**
Bentonite	**2.0 " "**
Alcohol	**8.0 " "**
Glycerine	**3.0 " "**
Wetting agent	**0.5 " "**
Methyl cellulose	**0.5 " "**
Water	**68.0 " "**
Dye and pigment	**sufficient**

Douche Powders: *Please advise us in what issue we can find a douche powder that will take care of Fungi and Trichomonas Vaginalis. Pasadena.*

This subject was treated in quite considerable detail in an article appearing in our January 1952 issue. As was pointed out in this review, the type of douche to be used is dependent upon the type of condition being treated. The pH is in important consideration. Therefore, I will give you a formula for both an acid and an alkaline douche powder. A boric acid douche powder can be made along the following lines:

Alum	**2.00 Gm.**
Tannic acid	**2.00 Gm.**
Boric acid	**8.00 Gm.**
Sodium citrate	**0.25 Gm.**

This is used at the rate of two teaspoonfuls per quart of water.

An alkaline cleansing vaginal douche can be made along the following lines:

Menthol	**2.5 Gm.**
Camphor	**2.5 Gm.**
Methyl salicylate	**5.0 cc.**
Sodium bicarbonate	**45.0 Gm.**
Sodium borate, to make	**100.0 Gm.**

This is used in the ratio of one teaspoonful per quart of water.

Electric Pre-Shave Lotions: *I should like information on the preparation of lotions that are used to "set up" the beard before using an electric shaver. I understand that some of these products are based on astringents and that others contain resins to stiffen the hair. Can you give me information on both types of pre-shave lotions? Brooklyn.*

Most simple preparations of this sort consist of an astringent in alcoholic solution. A typical pre-shave lotion may be made from:

Alcohol	**50.0 parts**
Water	**50.0 "**
Aluminum chloride	**0.5 "**
Color and perfume	**sufficient**

Another simple product of this sort consists of:

Menthol	**0.1 per cent**
Zinc sulfocarbolate	**0.8 " "**
Camphor	**0.1 " "**
Alcohol	**40.0 " "**
Witch hazel	**59.0 " "**

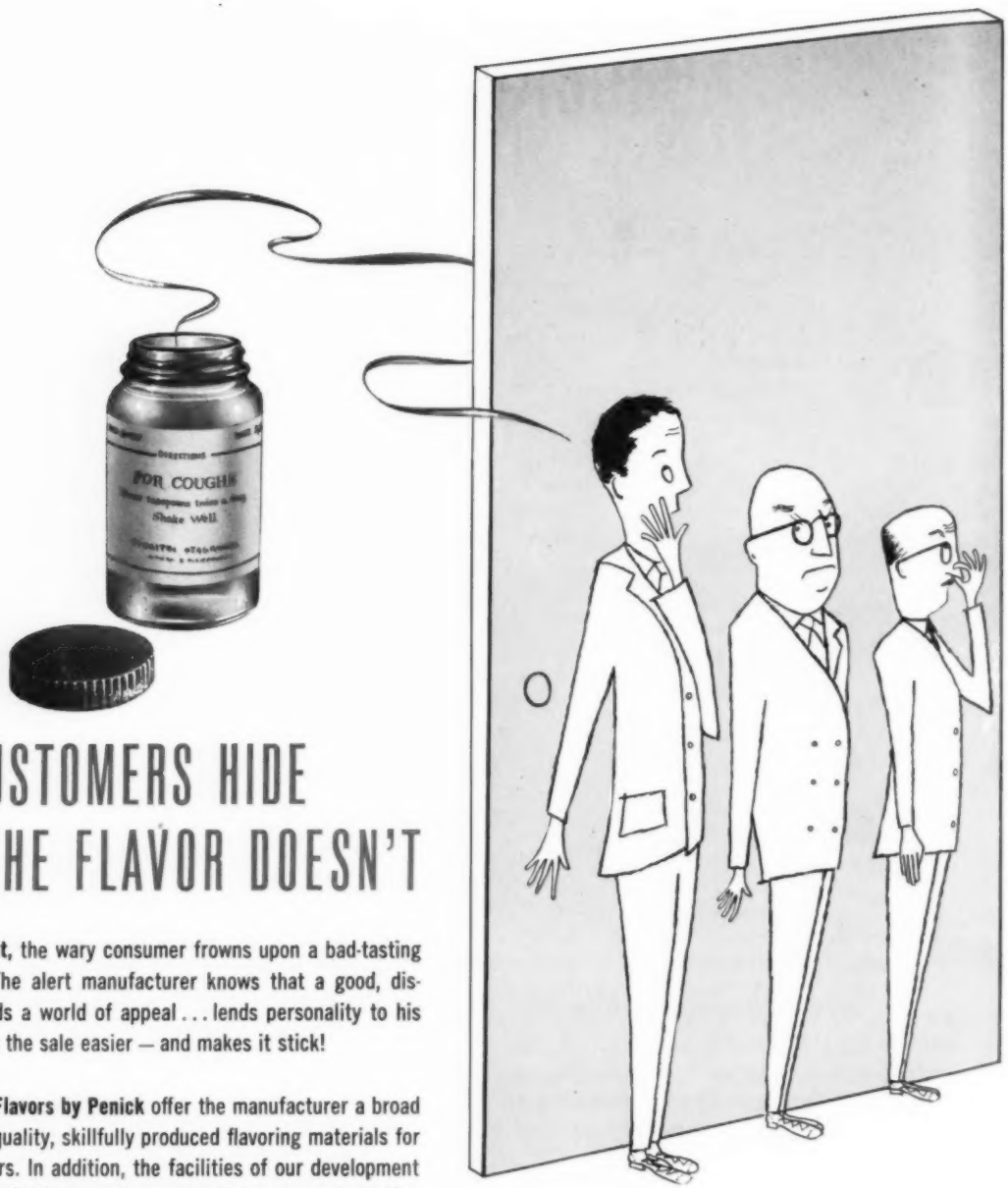
Pre-shave lotions using resins as the stiffening agents have been described in the patent literature. Information on such products may be obtained, for example, in U. S. patent 2,227,321.

Lanolin Hair Cream: *Will you please give me a formula for making an emulsion hair cream with lanolin? Los Angeles.*

Hair preparations containing lanolin have been given in our magazine from time to time. However, the following preparation, as given by Jannaway will, I believe, meet your requirements:

Mineral oil	**65.0 per cent**
Beeswax	**6.0 " "**
Borax	**1.0 " "**
Stearamide	**1.5 " "**
Wool wax alcohols	**0.5 " "**
Lanolin anhydrous	**2.0 " "**
Water	**24.0 " "**

All the materials except the borax and water are dissolved in the mineral oil with gentle heating. The warmed borax solution is then run in with constant stirring.



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Industry's Books

Industrial Wastes, Their Disposal and Treatment, Edited by Willem Rudolfs, Department of Sanitation, Rutgers University, American Chemical Monograph Series No 118, Book Div., Reinhold Publishing Corp., New York, (1953), 497 pp., Cloth, $9.50.

Written by a group of experts with long experience in the treatment of industrial waste materials, this monograph offers a thorough, up to date study of the disposal problems of such industries as meat packing, leather, pulp and paper, coal, fermentation industries, laundry soap industries, etc. Here, the physical, chemical and biological considerations of each type of problem are developed in full detail. You will find complete information on the scope of the waste treatment problem in general, the basic principles of steam pollution and self-purification, and modern views, theories and applications of individual treatment problems. Although principal stress is placed on treatment, ample attention is also given to the volumes and characteristics of wastes and the recovery of by-products. Recent advances in the field are given special emphasis. The subject of radio-active waste treatment is discussed in the light of latest available information.

Modern Treatment, A Guide For General Practice, by fifty-three authors, and edited by Austin Smith, M.D., Editor of the Journal of the American Medical Association, and Paul L. Wermer, M.D., Secretary Committee on Research, American Medical Association, 1146 pp., Paul B. Hoeber, Inc., New York, (1953), Cloth, $20.

This book is designed to provide the general practitioner with a useful and authoritative guide to the clinical problems in therapy which he is likely to encounter. A group of postgraduate teachers have joined in creating a volume which presents the practical essentials of today's therapy. In each discussion, attention is focused on the most effective treatment for the condition in the judgment of the author of the section. However, the descriptions are not limited to his preferences. Where appropriate, alternative forms of treatment are also considered, along with the author's evaluation of their role in the physician's armamentarium. It is recognized that often the recommended treatment may require supportive measures, or may not be feasible under particular circumstances, or may even be contraindicated by some supervening complication. Often the rationale of therapy must be understood to apply it properly. The authors attempt to take account of all such factors and provide sufficient information to enable the practitioner to adapt the best available treatment to the needs of each individual patient. The chapters have been organized to present the information in a logical sequence, as the clinical problem confronts the practitioner. Each chapter is intended to be sufficiently complete to stand by itself.

Hormonal and Neurogenic Cardiovascular Disorders, (Endocrine and Neuro-Endocrine Factors in Pathogenesis and Treatment, by Wilhelm Raab, M.D., Professor of Experimental Medicine and Head of Cardiovascular Research Unit, University of Vermont, 722 pp., Illus., (1953), The Williams & Wilkins Co., Baltimore, Cloth, $15.

The future of cardioangiology in theory and practice will largely depend on a growing insight into its intimate relationships with neurohormonal and hormonal biochemical functions. Knowledge of endocrine functions is expanding with breathtaking speed. Traditional concepts are changing; time-honored dogmas are fading; entirely unforeseen viewpoints are emerging. Many a medical field which has always seemed entirely free from endocrine complications must now be considered afresh in terms of hormonal biochemical effects. Nevertheless, there has persisted a most unhandy gap between the field of endocrinology and its neuroendocrine aspects and the field of clinical cardiology. Now Wilhelm Raab, a "clinician with investigative leanings," bridges this gap with the first general survey of the interlocking and overlapping of these two fields. He integrates the complex of endocrine and neurohormonal physiopathology with related functional and structural derangements of the cardoivascular system. He has collected the facts from the entire international literature, vitalized them and incorporated them into a logical system of clinical reasoning. The author has not hesitated to include his own personal views and challenging statements of new concepts.

The Nature of Virus Multiplication, Second Symposium of the Society for General Microbiology Held at Oxford University April 1952, Published for the Society for General Microbiology at The University Press, Cambridge (1953), 320 pp., Illus., Cloth $6.50.

In this symposium chemists, physicists, and research workers in medicine, plant pathology, entomology, poultry research, bacteriology and tumors discuss with each other whether there is anything in common between the modes of virus multiplication assumed to operate in these various spheres. Chantrenne—Problems of protein synthesis. Bawden and Pirie—Virus multiplication as a form of wrotein synthesis. Bauer—Metabolic aspects of virus multiplication. Markham—Nucleic acids in virus multiplication. Luria—An analysis of bacteriophage multiplication. Boyd—The role of mutation in the survival and multiplication of bacterial viruses. Lwoff—The nature of phage reproduction. Latarjet—The multiplication of bacterial viruses studied by radiobiological methods. Fildes, Kay and Joklik—Divalent metals in phage production. Gard—Aspects of the formation of incomplete virus. Hoyle—The multiplication of the influenza virus considered in relation to the general problem of biological multiplication. Flewett—Growth of viruses of the influenza group as revealed by electron microscopy of infected cells. Fulton—The argument for a venerable hypothesis of virus multiplication. Bergold—The multiplication of insect viruses. Carr—The multiplication of fowl tumor viruses. Sanders—Possible multiplication cycles in neurotropic viruses.

Advancing Therapy

English Cough Mixture

During a recent influenza epidemic, E. L. Moll (*Practitioner* 171:76, 1953) decided to try a mixture containing papaverine hydrochloride, 1/10 grain (6 mg.), and codeine phosphate, 1/3 grain (20 mg.), per fluid ounce (28 mg.) with tolu and glycerine. Using a dosage of ½ fluid ounce (14 cc.) three times daily and one fluid ounce (28 cc.) at night for adults, and 60 minims (4 cc.) three times daily and 120 minims (8 cc.) at night for children, this mixture provided relief of cough in over 200 patients. The mixture was also of great value in those cases that developed bronchitis, in which it relieved the tightness and bronchial spasm. The most significant observation was that no patient complained of nausea and vomiting.

On the basis of these and other observations, Moll came to the conclusion that the influenza virus causes an irritability of the involuntary muscles which may result in bronchial, gastric or intestinal spasm and that one or all of these symptoms may be found in the same patient. Papaverine and codeine, which may perhaps act synergistically, relieve such spasm by diminishing the excitability of the involuntary muscles and, simultaneously, exert a depressant action on the hypersensitive cough and vomiting centers, thus relieving the patient of excessive coughing; allowing the sputum to be expectorated easily, and also preventing vomiting and diarrhea. Balsam of tolu was included in the mixture as a reflex expectorant, and glycerine and syrup were used as a vehicle and for a demulcent action.

PAS & PVP for Tuberculosis

W. Weiss, M. Seven and G. M. Eisenberg (*Am. J. Med. Sci.* 225:560, 1953) have confirmed that the intravenous use of a combination sodium *para*-aminosalicylate (PAS) and polyvinyl pyrrolidone (PVP) offers certain advantages in the chemotherapy of tuberculosis. In their studies, the intravenous use of a preparation of 25 per cent sodium PAS in 3.5 per cent PVP has been compared with the intravenous use of 25 per cent sodium PAS alone. It has been shown that PVP does not interfere with the tuberculostatic efficacy of PAS *in vitro*. PVP acts to maintain higher and more prolonged blood concentrations of PAS and it does not prevent PAS from passing into the cerebrospinal fluid in adequate amounts. PAS-PVP has been used therapeutically for periods up to one week without significant toxicity. This preparation has the advantage that it may be given by syringe injection and small amounts of PAS are needed to establish high concentrations of the drug in the blood and cerebrospinal fluid.

Ammonium Chloride for Epilepsy

For one and one-half years, F. Kant, W. E. Gilson, H. A. Peters and H. Bouman (*Neurology* 3:336, 1953) have been giving ammonium chloride to a selected group of epileptic patients in addition to anticonvulsant drugs. The ammonium chloride was given to add a dehydrating and acidifying agent to anticonvulsant drugs. It has long been established that dehydration, as well as the tendency toward acidity, decreases the occurrence of epileptic convulsions.

In explaining their selection of ammonium chloride, Kant and his colleagues stated that this agent appeared to be a comparatively non-toxic drug which would combine the dehydrating and acidifying effect. Ammonium chloride dehydrates by the elimination of water through its diuretic action. If it is ingested, ammonium is liberated and tends to produce acidemia. It has the additional advantage of being cheap and available in enteric-coated tablets. The enteric-coated ammonium chloride tablets did not produce untoward side-effects in any of the 27 epileptic patients being treated in this study.

In summarizing their findings the investigators observed that ammonium chloride as an adjuvant to anticonvulsant therapy has not only brought about marked improvement in severe cases of epilepsy which were refractory to other drugs, but has made it possible to reduce these drugs in a number of cases. This is important since anticonvulsants may produce toxic manifestations and may affect the mental faculties of the epileptic. A number of patients have been rehabilitated and have returned to work.

Treatment of Hyperpigmentation

Abnormal increases in melanin pigmentation of the skin have always presented a difficult problem to man because of their cosmetic and social significance. Disfiguring pigmentation of the exposed areas may have important and lasting effects on the emotional well-being of the patient. In addition, the quantity of melanin in the skin may determine the status of a person in a given society. According to A. B. Lerner and T. B. Fitzpatrick (*J.A.M.A.* 152:577, 1953). Attempts to treat areas of melanin hyperpigmentation have been manifold. Such agents as ammoniated mercury and hypochlorite bleaches have been used frequently but without success. About 14 years ago a group of Negro workers were noted to have depigmentation of the hands after wearing rubber gloves. It was found that monobenzyl ether of hydroquinone, an antioxidant for rubber, was the active agent that produced the depigmentation. Since then, occasional reports have appeared on efforts to use crude monobenzyl ether of hydroquinone therapeutically to treat disorders of melanin hyperpigmentation. Although treatment was not very successful because of irregular results and sensitization reactions, some dermatologists continued using the drug in ointment form. In the past few years a purified and finely dispersed concentrated preparation of monobenzyl ether of hydroquinone (Benoquin) has become available for clinical study.

Of 84 patients with increased melanin pigmentation treated with this preparation by Lerner and Fitzpatrick, 64 showed a good clinical response after two to six months' treatment. Eleven of the 84 patients (13 per cent) became sensitive to the ointment and reported a local dermatitis. However, seven of these 11 patients had an excellent therapeutic effect before the sensitivity was acquired. The results obtained by these investigators showed that monobenzyl

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ether of hydroquinone is highly effective in generalized lentigines, severe freckling, hyperpigmentation due to photosensitization following use of certain perfumes (berlock dermatitis), and mealsma (Addison). Treatment was moderately successful in melasma (pregnancy) but of little or no value in *cafe au lait* spots or pigmented nevi. Other physicians reported good results in melasma (pregnancy) and postinflammatory hyperpigmentation but only fair improvement of *cafe au lait* spots. Mild or moderate freckling should not be treated because these lesions usually fade spontaneously during the winter months and the incidence of sensitization to the drug is relatively high.

Oral Cortisone for Infantile Eczema

There is no doubt, says L. W. Hill (*New England J. Med.* 248:1051, 1953) that cortisone or adrenocorticotropin (ACTH) often causes spectacular temporary improvement in infantile eczema. It is his opinion, however, that these agents when given parenterally and in a hospital, in spite of their great theoretical interest and undoubted temporary favorable action, have little place in the practical over-all management of the disease. Treatment with cortisone by mouth is a different question. If the dosage necessary to relieve the eczema does no harm to the child when continued over long periods, this should be a valuable and practical therapy. To explore the practical possibilities of oral cortisone therapy 18 infants under the age of three years were treated. Most cases were severe; some patients had done poorly with other usual methods of treatment. The duration of treatment varied between one and a half and eleven months, the average being three to six months. The results of treatment were superior in eight cases, worth while in six and unsatisfactory in four. The only immediate adverse side effects were the production of Cushing's syndrome in one patient, and potassium deficiency in another when the dose was too large.

Hill believes that cortisone given orally is a valuable addition to local and immunologic treatment for some infants with severe eczema. It is possible to continue cortisone treatment for several months without apparent harm to the child. Hill stresses, however, that treatment with cortisone is symptomatic only, for the purpose of tiding the child over a difficult period, and during treatment dietetic and environmental control and local therapy must not be neglected. Although no harm is apparent in most infants treated for relatively long periods with moderate doses of cortisone, this treatment should be used for severe cases only, and for as short a time as possible, to relieve an immediate, distressing situation. An entire cure is not expected, and it is better to maintain the eczema under reasonbaly good control with moderate doses than to suppress it entirely with large doses.

Vitamin A Transfer through Skin

In a paper presented before the Division of Biological Chemistry during the 124th meeting of The American Chemical Society on September 11, 1953, A. E. Sobel and A. Rosenberg gave the results of a study that was undertaken to measure the effectiveness of vitamin A transfer through the skin. Vitamin A administered topically may be of value in the relief of local tissue vitamin A deficiencies which can occur even on adequate intake and absorption. Growth rate curves and body vitamin A stores were used as indexes of transfer. Albino rats were depleted of vitamin A on the USP XIV test diet and shaved in the scapular region to expose about 2 sq. cm. of skin. A standard cod liver oil ointment and lotion were found convenient for topical application. Approximately 250 mg. of each preparation was rubbed daily into the shaved area. The preparations employed (Desitin) contained on analysis 2.9 to 3.1 micrograms of vitamin A per 100 mg. Precautions were taken that none of the vitamin was orally accessible. Weight gains and liver and kidney vitamin A stores were compared with those of litter mates receiving daily one microgram of vitamin A by stomach tube.

Arterenol for Shock

The value of arterenol (non-epinephrine), a pressor amine, for treating shock is indicated in the report of A. J. Miller and his colleagues (*J. A. M.A.* 152:1198, 1953). In their study arterenol has been used in the treatmens of 40 episodes of shock from various causes in 32 patients. Nine patients were in shock following acute myocardial infarction. Excellent pressor responses were obtained with treatment in 25 of the 32 patients; in five patients the pressor response was moderate, and in two there was no response. The results strongly suggest arterenol to be a valuable adjuvant to the therapy of shock. There was no evidence that arterenol increased myocardial irritability. No undesirable subjective reactions were noted. In no instance was heart failure precipitated or aggravated by arterenol, and there were no apparent ill effects in patients digitalized before or during arterenol therapy. Further evidence for the value of vasopressor therapy in the treatment of cardiogenic shock is given. Arterenol was effective as interim therapy of oligemic shock until whole blood could be obtained. It was of value in the treatment of shock associated with barbiturate intoxication, bulbar poliomyelitis, virus pleuropericarditis, ruptured ectopic pregnancy, and empyema of the gallbladder. Anaphylactic shock was also successfully treated.

Erythromycin Ointment

The preliminary report of H. M. Robinson, Jr. and I. Zeligman (*J. Investig. Dermat.* 20:405, 1953) describes their observations on 70 patients with various dermatoses treated with one per cent erythromycin ointment. The antibiotic was applied in an ointment base consisting of petrolatum with five per cent of heavy mineral oil. Forty-seven of these patients had one of the primary pyodermas. Those with impetigo contagiosa and ecthyma showed a prompt response to treatment with erythromycin ointment. The lesions of impetigo contagiosa healed completely in from three to nine days, depending on the severity of the lesions. Ecthymata healed in from seven to 14 days, depending on the severity of the condition and the depth of the ulcers. Four cases of sycosis vulgaris were treated; involution of the lesions was complete in three patients in from nine to 14 days, and in the fourth patient all lesions had disappeared in 31 days. There were no failures in three cases of purulent paronychia. The remaining 23 patients had dermatoses in which the secondary infection was eradicated in from four to 21 days by the local application of one per cent erythromycin ointment. The ointment had no beneficial effect on the basic condition.

One patient with a stasis ulcer complained of a burning pain due to the application of the ointment. No other adverse reactions were noted. None of the patients in this series developed any manifestation of contact-type sensitivity to erythromycin ointment.

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So at that time we began the practice of inserting what might be called "Situation Wanted Ads" in some of our bulletins, always in the interests of service men and women. Somewhat to our surprise and embarrassment we began to receive calls from non-service people, some with excellent backgrounds in the industry, requesting that we do the same for them. This presented a real problem and we had to devise rules to meet it. These rules are:

1. For all excepting returning service personnel, we restrict the service to *executive, sales* or *technical* people.

2. We accept no applications from people presently employed unless their employers are aware of the fact that they are seeking a change.

3. Because the service seemed likely to get completely out of hand, we no longer run "Want Ads" in the Bulletin Service. Instead we maintain an active file of applicants and of employment opportunities, and refer applicants when suitable jobs come to our attention. Occasionally we issue a Bulletin listing the types of applicants in that file.

We are happy to report that we have been able to place many people and we believe that this extremely limited service has been of value to the industry as well as helpful to capable people seeking employment. We urge members of the industry, when they are looking for experienced *executive, sales* or *technical* personnel to call the T.G.A. Perhaps we know of just the sort of person who will fit that job in your organization. That would be a T.G.A. service to you and a helping hand to the person who may want—and need—the job which you have to offer.

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Further advertisements in this series will present to the industry what we feel will be an interesting picture of your Association's activities. Please read them and get to know us better.

Compounder's Corner

Cold Waving Lotions and Creams

It is pointed out by J. L. Stoves (*Retail Chemist* 24:37, April, 1953) that ammonium thioglycollate in ammoniacal solution is the basis of most cold waving lotions, which are formulated with resin dispersions of the polyacrylate type to produce cloudy or opaque preparations. Alternatively, lanette wax SX or cetyl alcohol, distilled water and wetting agent can be emulsified in the usual way and after the emulsion has been cooled to room temperature, thioglycollic acid and ammonia are added

Stoves notes that many of the present types of cold waving cream show a marked tendency to separate into their component phases when sufficient percentages of oils or oily type materials are added to the mixture. Furthermore, many types of emulsions break down when an attempt is made to incorporate suitable proportions of thioglycollates or keratinous protein.

These difficulties are overcome by emulsifying with water a chlorinated paraffin hydrocarbon, such as chlorinated paraffin wax containing at least 13 carbon atoms per molecule by means of an emulsifying agent such as sorbitan mono-oleate which is soluble in oil, and an emulsifying agent such as a sorbitan mono-oleate polyoxyalkalene derivative which is soluble in water, and adding ammonium thioglycollate to the mixture in a percentage range of 2.5 to 8 per cent by weight of the total weight of the aqueous solution. Such a composition readily forms a substantially permanent creamy, homogeneous emulsion of the oil-in-water type on incorporation of mineral or non-drying vegetable oils in amounts up to 40 per cent by weight of the composition and lanolin up to 20 per cent.

Powdered Silk

In view of the growing interest in the use of powdered silk in cosmetics, a process for making the pulverized product is especially noteworthy. In the method described by K. Kashima in Japanese patent 1950 (through *Chem. Abstr.* 47:6668, 1953), 1 kg. of refined silk fiber in 4 kg. of 95 per cent phosphoric acid is heated gently to form a homogeneous colloidal solution. The solution is poured into three volumes of 92 per cent ethyl alcohol. The precipitate is filtered, neutralized with four per cent sodium hydroxide and water, dried at less than 60°C, and ground in a ball mill.

Protective Cream

Creams for protecting the hands from fats, oils, dyes and hydrocarbons are described by F. Bevilaqua and M. Porro in Italian patent number 469,137. A typical preparation consists of:

Stearic acid	**10.0 parts**
Lanolin or beeswax	**1.5 "**
Glycerine	**5.0 "**
Casein	**0.3 part**
Ammonia	**0.5 "**
Water	**35.0 parts**

The casein may be replaced by a larger amount of neutral soap. Coloring matter, deodorants, or antiseptic substances may also be added.

Stainless Coal Tar Ointment

As a result of efforts to prepare a stainless coal tar ointment, S. W. Goldstein (*Drug Standards* 21:151, 1953) has developed the following formula, which has been submitted for the consideration of the Committee on National Formulary:

Coal tar solution	**50 cc.**
Polyethylene glycol 400 monostereate	**250 Gm.**
Polyethylene glycol ointment	**700 Gm.**
Menthol	**2 Gm.**

Mix thoroughly the polyethylene glycol 400 monostearate and the polyethylene glycol ointment. Dissolve the menthol in the coal tar solution, add the solution in small portions to the mixture, with mixing after each addition, and mix until uniformly distributed. If a hot process is used to mix the ingredients to form Stainless Coal Tar Ointment, the final product should be cooled to room temperature with stirring, and then it should be mulled or passed through an ointment mill.

The resulting product is a smooth, cream to light yellow colored ointment, with a not unpleasant modified tar odor. It is easily applied, and can be removed by washing with cold or warm water. It does not leave a noticeable stain after removal of the ointment from dermal surfaces or from cloth.

Hectorite, New Clay

Hectorite, a montmorillonite clay closely related to bentonite, has been studied by M. Barr and I. Griffith (*Am. J. Pharm.* 125:79,953). They found that hectorite forms suspensions in water that are alkaline; the pH of these suspensions falling as the hectorite-to-water ratio increases. It was observed that pH markedly influences the viscosities of hectorite suspensions. However, because of the presence of carbonate, the hectorite used in this study is incompatible in the acid range. Maximum viscosities were obtained in pH range of 9 to 11. While hectorite does not form suspensions as viscous as those formed with bentonite, it does exhibit the phenomenon of thixotropy. Hectorite was found to be inferior to bentonite as a suspending agent in the tests made by Barr and Griffith.

These workers prepared the following ointment base utilizing hectorite:

Hectorite	**25.00 per cent**
Glycerine	**10.00 " "**
Methylparaben	**0.15 " "**
Propylparaben	**0.05 " "**
Water, distilled, to make	**100.00 " "**

Ointments of sulfathiazole, ammoniated mercury and phenol made with this base give larger areas of inhibition than when these drugs are incorporated in greasy bases. Bases prepared with hectorite are incompatible with acidic drugs such as boric acid. According to Barr and Griffith, there are no apparent advantages of hectorite over bentonite as a constituent of ointment bases except that hectorite produces a whiter

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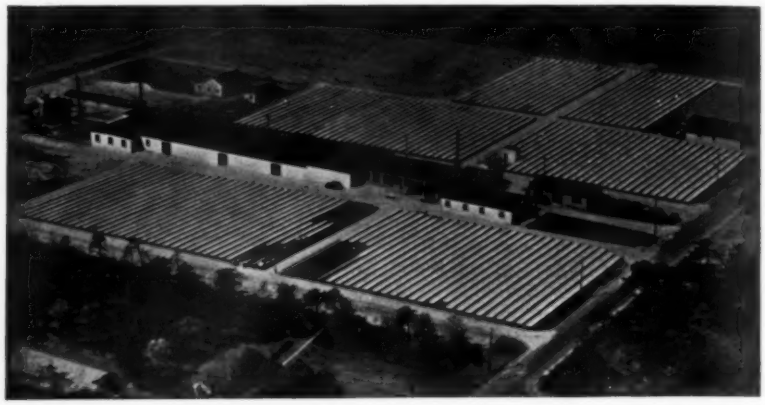

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base. They are of the opinion, however, that it may be possible to alter the nature of hectorite to change its properties markedly.

Barrier Creams

The purpose of barrier creams, says N. S. Peel (*Soap, Perf. & Cosmetics* 26: 152, 1953) is to protect the skin against various irritants encountered in industry and the home. They have also been called protective creams, skin protectives, invisible gloves, and industrial creams. In Peel's opinion, a properly formulated barrier cream should possess the following properties: (a) Good consistency and ease of application, (b) Good and reasonably persistent adherence to the skin, (c) Ability to form a coherent, impervious, flexible and non-cracking film, (d) Freedom from any tendency to irritate the skin, (e) Ease of removal when desired, (f) Esthetic acceptability, from the point of view of comfort on application, relative imperceptibility, etc.

These are basic requirements. The next and most important factor to consider is the formulation of each type of barrier cream in relation to the properties of the particular irritant against which protection is desired. Obviously there can be no "universal barrier" against solvents, acids, alkalis, cutting oils and aqueous solutions of detergents. Conversely, there is no doubt that most so-called barrier creams are not formulated with sufficient specificity. Citing several examples of preparations that offer specific protection, Peel notes that the following product, originally recommended by Reuter, may be used as a protection against alkaline solutions:

Lanolin	**9.0 parts**
Stearic acid	**50.0 "**
Triethanolamine	**2.7 "**
Carbitol	**18.0 "**
Saturated solution of boric acid	**120.0 "**

Conversely, the use of weak alkalis, like sodium bicarbonate or sodium borate, is indicated in the neutralization of irritant acids. A second valuable procedure is the use of detoxifying chemicals which act on the irritating materials to form either insoluble or non-irritating chemical compounds. Thus the dichromates can be detoxified by sodium or potassium bisulphite. Dermatitis from tincture of iodine can be neutralized by wet dressings of five to 10 per cent sodium thiosulphate. Dermatitis due to fluorides should be helped by repeated applications of a paste made of glycerine or liquid petrolatum and magnesium oxide, followed by wet dressings of 10 per cent calcium gluconate.

Also illustrative of specialized preparations is the following composition for use as a barrier against acid mist:

Lanette wax S X	**8.0 parts**
White wax	**1.0 part**
Mineral oil	**1.0 "**
Kaolin	**0.5 "**
Borax	**0.0 "**
Perfume	**trace**
Water, to make	**100.0 parts**

In considering the more generally useful protective creams, Peel states that the German Draigerwerk have issued to their employees a modified soap-type barrier consisting of:

Soap	**23 per cent**
Gum arabic	**5 " "**
Lanolin	**5 " "**
Glycerine	**3 " "**
Water	**64 " "**

He also calls attention to the following protective cream which is currently used at the University College Hospital, London, in place of the older zinc-castor oil ointment:

Zinc oxide	**10.0 parts**
Castor oil	**53.0 "**
Wool alcohols	**3.2 "**
Oleic acid	**1.0 part**
Stearic acid	**1.3 "**
Lime water	**31.5 parts**

This is claimed to be effective for protecting the skin against water or watery discharges, and the like.

New Water-Soluble Suppository Base

H. M. Gross and C. H. Becker (*J. Am. Pharm. Assoc.* Scient. Ed. 42:498, 1953) have developed a new water-soluble, high melting-point suppository base with a short time interval, high percentage medicinal release. This new base consists of polyoxyethylene 30 stearate, water, white wax, and Aerosol OT. The percentage wax necessary to maintain a 50° C. melting-point range must be varied according to the physical and chemical nature of the incorporated medicinal. Experimentation with various medicinals indicated that between the limits of three to 15 per cent white wax necessary to maintain the 50° C. melting range, there was little effect upon the promptness of release of medicinal from the base. The data indicated that polyoxyethylene 30 stearate with three per cent white wax, five per cent water, and 0.5 per cent Aerosol OT had the best medicinal release percentage as compared with the other combinations or theobroma oil. The melting-point range of this combination was in the 50° C. range.

The developed suppository base is white, has a slight characteristic odor, and is a waxy solid at room temperature. The base substance is fairly inert chemically and thus presents few incompatibilities with medicinals commonly administered as suppositories. The nonionic nature of the substance aids in the general compatibility. Generally, the base appears to be compatible with most medicinals used in suppositories. The compatibility and storage tests carried out with specific drugs in the therapeutic classification: astringent, alkaloid, antibiotic, and barbiturate seem to indicate a long possible shelf life for medicinal suppositories made with thie base. Storage of the prepared medicinal suppositories at elevated temperatures resulted in a loss of drug so minute that it was considered to be due to experimental error in performing the respective assays.

The suppository base is nontoxic, relatively nonirritating, and safe for internal administration.

Cold Wave Emulsion

In British patent 679,841 (through *Soap, Perf. & Cosmetics* 26:70, 1953) S. O. Ronk and L. R. Hunter describe hair-waving compositions containing an ammonium thioglycolate suitable for preparing cold waving creams. The method of producing such a hair-waving composition includes the step of emulsifying with water a chlorinated paraffin hydrocarbon, such as chlorinated paraffin wax containing at least 13 carbon atoms per molecule, by means of an emulsifying agent, such as sorbitan mono-oleate polyoxyalkylene derivative, which is soluble in water, and adding ammonium thioglycolate to the mixture in a percentage range from two to eight per cent by weight of the total weight of the aqueous solution. Such an emulsifying base containing ammonium thioglycolate readily forms a substantially permanent creamy, homogeneous emulsion of the oil-in-water type when oils, lanolin or other desirable components are incorporated into a cold-waving cream to be used for permanent waving of the hair.

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Oil of Litsea Cubeba

In studies on the essential oil of *Litsea cubeba*, R. Kato (*J. Chem. Soc. Japan* 54:467, 1951) observed that the volatile oil of the leaves of the plant contains 80 per cent cineol, four per cent camphene, seven per cent *alpha*-terpineol, and one per cent sesquiterpene. In another report (ibid. 54-517, 1951) he stated that 20 per cent *d*-limonene, five per cent linalool, 60 per cent citronellal, and some pelargonic acid were found in the volatile oil from the trunk *Litsea cubeba*.

Indian Guava Oil

According to A. Bhati (*Perf. & Essent. Oil Rec.* 44:46, 1953) Guava, popularly known in Hindustani as Amrood, is a common and delicious fruit of the species of *Psidium*, a genus of the *Myrtaceae* family. The species, which is very common, is "*Psidium guayava*." A small tree from 15 to 20 feet high, *Psidium guayava* is a native of tropical America and the West Indies, naturalized and cultivated throughout India. The leaves of the guava-tree are medicinally important. They are used in wounds and ulcers, and as an astringent. When chewed, they are said to be a remedy for toothache. A decoction of the young leaves and shoots is prescribed in the West Indies in febrifuge and antispasmodic baths. An infusion of the leaves is given in cerebral affections, nephritis and cachexia. The pounded leaves are locally applied in rheumatism.

In view of the medicinal importance of the leaves and the incomplete knowledge regarding the chemical composition of the essential oil obtained from them, Bhati undertook the investigation of the essential oil obtained from the leaves of the Indian plant. The essential oil was isolated by hydro-distillation of the leaves. During the distillation it was observed that the yield of the essential oil depends very much on the age and stock of the leaves. Thus the yield of the oil from the leaves of old and somewhat neglected trees was as low as 0.02 per cent, whereas from leaves of plants of good stock, the yield was as high as 0.31 per cent. The latter oil was obtained as a yellowish-red, floating liquid with an agreeable odor. This floating oil was used for the determination of the various physico-chemical constants, which were found to be as follows:

Specific gravity	**0.9192**
Refractive index	**1.4870**
Optical rotation	**–13.06°**
Ester number	**4.7**

This oil, on repeated fractionation under reduced pressure, furnished four main fractions, the properties of which are given in the following table:

Fraction No.	*Boiling point*	*Specific Gravity*
I	78–80°/24–5 173–5°/750	0.8604
II	112–114°/5.5 125–7°/9	0.9194
III	125–7°/4	0.9016
IV	148–5°/10	0.9572

Fraction No.	*Refractive Index*	*Optical Rotation*
I	1.4683	+ 73.64
II	1.5044	– 1.86
III	1.4965	– 5.72
IV	1.5013	– 14.50

Fraction I, a clear colorless oil, was found to possess a characteristic smell, somewhat resembling the odor of unripe mangoes. Analysis of this fraction gave results agreeing with the formula, $C_{15}H_{16}$. Fraction II, from analyses, as well as from its chemical properties, appeared to be a bicyclic sesquiterpene. Fraction III also appears to be a bicyclic sesquiterpene. Fraction IV seems to be a sesquiterpene-alcohol, with the formula $C_{15}H_{24}O$ or $C_{15}H_{22}O$.

Borneol Esters from Pinene

In Japanese patent 845 (through *Chem. Abstr.* 47:2211, 1953), B. Masumoto and T. Funabashi describe a procedure for making borneol esters from pinene. In their method, 1 Gm. of mercuric oxide in 50 Gm. of acetic acid, 5 Gm. of acid clay, 5 Gm. of sulfur trioxide (for the formation of mercuric sulfate and to accelerate its catalytic action), and 50 Gm. glacial acetic acid treated dropwise with 100 Gm. pinene at 20°C for three hours yielded 82 per cent borneol acetate.

Oil of Citrus Unshiu

In a report on the preparation of an essential oil from the outer skin of *Citrus unshiu*, B. Hamaguchi (*Shokuryo no Kagaku* 2:146 through *Chem. Abstr.* 47:2433, 1953) stated that the oil cells were mechanically destroyed, and the essential oil was obtained by a continuous steam distillation in a new apparatus. The oil was excellent, fragrant and of pale yellow green color. It has the following properties:

Specific gravity	**0.8443**
Index of refraction	**1.4720**
Acid number	**0.15**
Ester number	**1.17**
Ester number after oxidation	**6.42**

Wassell suggests the use of various additives for modifying the viscosity and lathering properties, improving hard water toleration and maintaining a light color. Thus non-ionic detergents may be used to improve its lathering properties and viscosity. Rinsing is improved by a nonionic detergent or by the use of chelating agents. Polyphosphates may also be used to improve the properties of the amine soap shampoos.

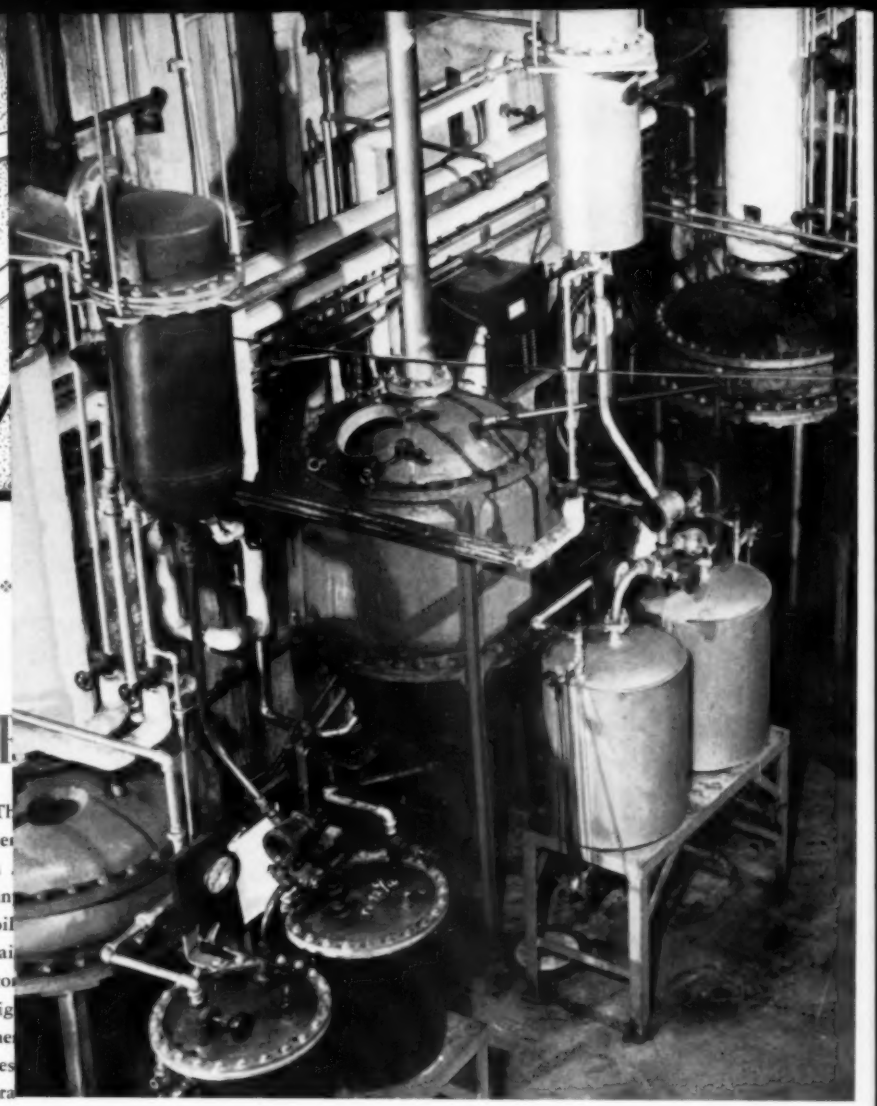
Oil of Magnolia Salicofolia

In their report on the essential oil of *Magnolia salicofolia*, T. Matsuura and Y. Wanatabe (*J. Sci. Hiroshima Univ.* 16:169, 1952 through *Chem. Abstr.* 47: 7739, 1953) state that steam distillation of the leaves and small branches of the plant yielded a slightly yellow oil showing the following properties:

Specific gravity	**0.9550**
Specific rotation	**–1.5°**
Index of refraction	**1.5400**
Acid value	**0.64**
Ester value	**4.6**

Fractionation was performed through a Fenske column. The main constituent was anethole, which was present in a

TOP NOTES by J



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August—Poppy or Gladiolas

September—Aster or Morning Glory

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concentration of 73 per cent. Other constituents were 1.3 per cent of 1,8-cineole, a trace of citral, seven per cent of anisaldehyde, and three per cent of hydrocarbon.

Concrete Oil of Erica Multiflora Flowers

After extracting the flowers of *Erica multiflora* with benzene, M. Fesneau (*Industrie parfum.* 8:46, 1953) obtained 3.5 per cent of a viscous, green, pleasant-smelling oil. The oil has an acid number of 25.2, an ester number of 16.8 and is not affected by saponification. It gives a brown color with ferric chloride and antimony trichloride and contains no azulenes. The concrete oil, extracted with 90 per cent alcohol, gave a 35 per cent yield of an absolute oil with a fine odor which could be used in perfumery.

Antifungal Action of Essential Oils

In 1930, attention was first called to the importance of essential or volatile oils in the vegetable economy because, apart from their attraction to insects, which favors fertilization, and their repellent action on other organisms harmful to plants, they have an antiseptic action which protects the plant against noxious bacteria and fungi. The existence of the antifungal activity led X. Vilanova and M. Casanovas to investigate the efficacy of various essential oils in superficial mycoses of the skin. The clinical application of these oils was followed by satisfactory results.

In their clinical report, published in 1951, they stated that seven children, all under 11 years of age, were affected with tinea of the scalp by *Trichophylon violaceum*. Application of a eugenol and geraniol ointment, followed by a eugenol and citral one, resulted in three of the children being cured within a maximum period of two months. Another child, age five, with *T. craleriforme* tinea, was cured in three weeks. A little girl of three, with tinea *M. audouini*, was also cured of her lesions within three weeks. Six cases of inguinal or interdigital epidermophytosis were cured. Another three improved but relasped. They, however, had already proved resistant to other treatment. Further, three cases of herpes circinatus, and two of pityriasis versicolor were completely cured.

As a result of continued *in vitro* laboratory tests, described in *The Journal of Investigative Dermatology* (20:447, 1953), Vilanova and Casanovas have affirmed that the essential oils of certain plants possess a marked fungistatic, and in some cases, even fungicidal, action. The strongest actions are those of the Neroly, Portugal, Geranium palmarrosa, linalool, and citronella essential oils. Some of the components of the essential oils mentioned are both very active fungistatics and fungicides, particularly the derivatives of the phenolic type, and the derivates of the hexavalent acyclic terpenes, and, more especially, those which are doubly unsaturated.

Turpentines of Mexican Pines

In further studies on gum turpentines of pines, P. M. Iloff, Jr. and N. T. Mirov (*J. Am. Pharm. Assoc.*, Scient. Ed. 42:464, 1953) report on the materials obtained from three types of trees growing in Mexico. Thus, the oleoresin from *Pinus montezumae* from Chiapas yielded 25 per cent of turpentine. The turpentine possessed the following physical properties:

Specific gravity	**0.8441**
Index of refraction	**1.4612**
Specific rotation	**19.2°**

Fractionation and analyses showed that the turpentine of *P. montezumae* from Chiapas consists of 72 per cent *d* and *dl*-α-pinene, 6-7 per cent *l* and *dl*-limonene, eight per cent heptane, eight per cent longifolene and one to two per cent oxygenated terpene derivatives.

The oleoresin of *Pinus oocarpa* var. *trifolia*, collected near El Salto, Durango, yielded 23 per cent of turpentine which had the following physical characteristics:

Specific gravity	**0.8588**
Index of refraction	**1.4682**
Specific rotation	**39.8°**

This turpentine is estimated to contain approximately 87 per cent *d* and *dl*-α-pinene, about five per cent unidentified terpenes, and 4.5 per cent *d*-longifolene.

A yield of 25 per cent of turpentine was obtained from the oleoresin of *Pinus durangensis*, from the State of Durango. The physical characteristics of this turpentine were as follows:

Specific gravity	**0.8566**
Index of refraction	**1.4702**
Specific rotation	**15.4°**

Fractional distillation and analyses led to estimates that the turpentine of *P. durangenis* contains approximately 71 per cent *d* and *dl*-α-pinene, 19 per cent *l*-β-pinene, three per cent *d*-cadinene, and seven per cent unidentified material including pot residue and losses.

Oil of Mentha Pulegium

According to A. F. Costa and J. C. do Vale (*Noticias farm.* 18:106, 1952) the essential oil of *Mentha Pulegium*, obtained from plants growing wild in Portugal, had the following properties:

Specific gravity	**0.935-0.937**
Specific rotation	**11.3-11.5°**
Index of refraction	**1.4829-1.4851**

The oil contained 83 per cent or more of pulegone, some menthone and *beta*-caryophyllene, and small amounts of unidentified phenols and other compounds.

Pinus Longifolia Oil from India

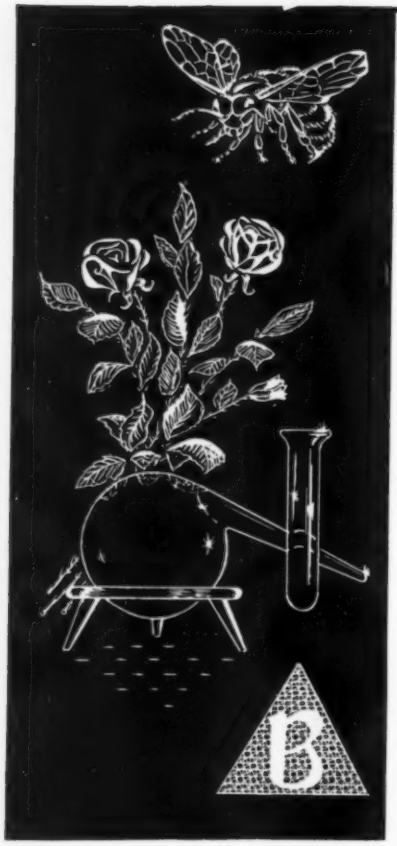
J. Verghese and K. C. Gulati (*J. Sci. Ind. Research* 10A:112, 1951) report that the turpentine oil distilled from the resin of chir pine (*Pinus longifolia*) of India has the following constants:

Specific gravity	**0.8717**
Specific rotation	**-2.72°**
Index of refraction	**1.4725**
Acid value	**2.4**

The oil contains from eight to 39 per cent of *alpha*-pinene and *beta*-pinene, from 37.6 to 60 per cent of *beta*- and *alpha-delta*[3]-carene, and from five to 20.3 per cent of longifoline.

Determining Ethereal Oil Content of Drugs

Improvements in methods of determining the ethereal oil in drugs by distillation have been developed by M. Schirm (*Deutsch. Apoth.-Ztg.* 93:273, 1953). He points out that in the steam distillation of ethereal oils the water-soluble compounds distill at a slower rate than the water-insoluble compounds, hence a fairly long period of distillation is needed. However, this time can be shortened if the material to be steam-distilled is first saturated with sodium chloride to decrease the solubility of water-soluble compounds. Schirm suggests that a measured amount of xylene be added to the material to be distilled. This would increase accuracy by preferentially dissolving compounds which would otherwise dissolve in the aqueous phase of the distillate and, at the same time, would aid in washing down the condenser.



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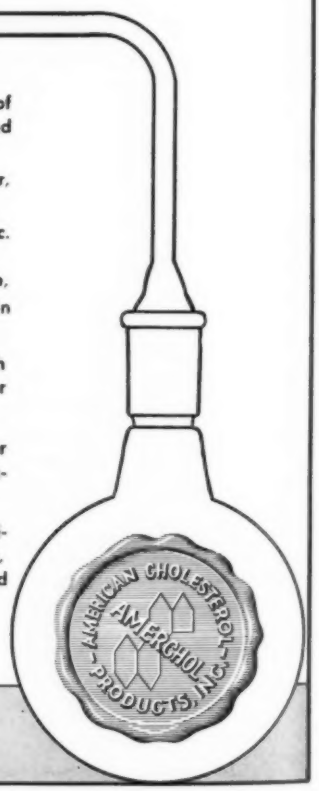

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Patent Thoughts and Trends

*by Thomas Cifelli, Jr.**
PATENT ATTORNEY

ANTI-ENZYMES (*Continued from page 319*)

TABLE
Plaque pH Measurements

Dental Cream	Subjects	Initial	1st Week	2nd Week	Change to	After 1 wk.
Sodium lauroyl sarcoside dental cream group	Av. Init. pH	6.0	6.2	6.0	Control	6.4
	Av. Min. pH	5.1	5.9	5.8	Dental	5.2
	Av. pH drop	0.9	0.3	0.2	Cream	1.2
Control Dental Cream group	Av. Init. pH	6.3	6.3	6.2	Sarcoside dental cream	6.3
	Av. Min. pH	5.4	5.4	5.4		6.0
	Av. pH drop	0.9	0.9	0.8		0.3

acidity due to the degradation of the glucose in the mouth. The results noted are as follows:

It is to be noted that the sarcoside-containing dental cream of the present invention maintained the minimum pH of the dental plaque at a desirably high level and a very small average pH drop after the glucose rinse, in comparison to the results achieved with the control dental cream. The effects are all the more striking when both groups exchanged the dental creams. It appears that the initial sarcoside group receded to their original procedure of forming acid readily and in fairly large quantities following a glucose rinse when using the control dentifrice. In contrast thereto, the initial control tooth paste group began to show the desired improvement characteristic of the sarcoside-containing tooth paste after using the latter for a relatively short time.

Other Data on Toxicity of Anti-Enzymes

Further extensive research relative to such higher fatty amides of amino acid compounds discloses that they are essentially non-toxic in normal use. It has been determined, for example, that sodium lauroyl sarcoside has extremely low acute and chronic toxicity values, and exhibits no apparent sensitization of the subjects or irritation to the mucous membranes. In addition, it has been found that such active ingredients markedly inhibit breath and mouth odors for a prolonged period of time also.

Anti-Enzymes of the Invention

In general, the suitable active ingredients are the higher fatty amides of lower aliphatic amino carboxylic acid compounds, such as those having about 12 to 16 carbon atoms in a long-chain fatty acyl radical. Optimum results are achieved with the dodecanoyl, tetradecanoyl, hexadecanoyl derivatives. These compounds may be produced by the condensation of a higher fatty acylating substance with the suitable amino compound. The lower amino acid portion of these active ingredients is generally derived from the lower aliphatic saturated amino carboxylic acids, such as, for example, those having up to about six carbons, usually the monocarboxylic acid derivatives. It is preferred that the compounds be derived from the amino substituted lower alkane carboxylic acids, such as the monoamino substituted alkane monocarboxylic acids, particularly the alpha amino substituted acids. Suitable amino acids from which the higher fatty amides thereof may be derived are aminoethanoic acid (glycine), methylaminoethanoic acid (sarcosine), 2-aminopropanoic acid (alanine), 3-aminopropanoic acid, valine, etc. It is preferred to use the amides of those acids having about two to about five carbon atoms, and more particularly, the sarcoside and glycide derivatives and their homologues having up to about five carbon atoms in the amino acid portion of the molecule in view of the excellent results obtained by their use.

Such amides of amino carboxylic acid compounds are to be generally employed in the form of their free acids or preferably as the water-soluble salts thereof. In general, the desired salts are the water-soluble carboxylate salts such as the alkali metal (e.g. sodium, potassium, etc.), ammonium, amine alkylolamine (e.g. mono-, di-, tri-ethanolamine), etc. Further specific examples are sodium N-lauroyl sarcoside, potassium N-lauroyl sarcoside, sodium N-myristoyl sarcoside, sodium N-palmitoyl sarcoside, N-lauroyl sarcosine, sodium N-lauroyl glycide, etc. The alkali metal salt derivatives appear to be about equally effective and yield usually optimum results in comparison to other water-soluble salts. For convenience herein, reference to "amino carboxylic acid compound," "sarcoside," "glycide," etc. refers to such compounds having a free carboxylic group or the water-soluble carboxylate salts.

These amides may be utilize in pure or substantially pure form and may be produced in any suitable manner provided the compounds possess the indicated acid - inhibiting and protein - adsorption capacity. The production or presence of fatty acid soaps or the like with the amide compounds is inherent in most commercial methods of manufacture of these amide compounds. It has been found that, in the condensation of the suitable fatty acid derivative with amino acid compound, the quality of the product is an essential consideration. Unless proper controls are exercised, the product may be admixed with various materials which substantially adversely affect the activity of the

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Atropine	Hydrastine	Rutin
Berberine	Hydrastinine	Sanguinarine
Brucine	Hyosine	Scammony Resin
Cantharidin	Hyoscyamine	Solid Extracts
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active ingredients in the relationship set forth. Such products or mixtures may be suitable per se for many purposes such as general cleansing uses, etc. It is requisite to their effectiveness in the present invention, particularly in view of the specificity of action for protein adsorption, that these active ingredients be used substantially pure form, such as being substantially free from free fatty acids or their soaps. It is critical that the amount of fatty acid material or the like admixed with the amide be at a minimum since excessive amounts substantially adversely affect the protein adsorption capacity of the amides. The tolerable amount of fatty acid material will vary in degree with the specific active ingredient, specific type of soap material, etc.

In general, the concentration of fatty acid or soap material in the product should be less than about 15 per cent by weight of amide, and preferably up to about 10 per cent, and insufficient to substantially deactivate the amide compounds by neutralizing or preventing their adsorption by the protein material. It is considered that the amount of fatty acids or soaps should be not substantially in excess of about five per cent for optimum effects. Thus, it will be noted that the ratio of higher fatty acid material or the like to the amide compound preferably should be of the order of a maximum of about 1:10 by weight, usually about 1:15, with about 1:20 maximum desired.

The active ingredients may be used in any suitable form. They may be prepared conveniently in particulate form by subjecting an aqueous slurry or solution thereof to any conventional drying means, e.g. drum-drying, and preferably to spray-drying, to form essentially homogeneous particles capable of rapid dissolving action. Alternatively, they may be utilized in powder or crystal form or in the form of a suitable solution.

Thus, these active ingredients may be utilized in any preparation designed for application to the oral cavity. There may be prepared suitable tooth powders, tooth pastes, creams in collapsible tubes, lozenges, chewing gum, liquid dentifrices, mouth washes, etc.

Any suitable amount of active ingredient may be incorporated in the dentifrice preparations or the like. The specific concentration of active ingredient thereof will vary naturally, depending on the specific type of preparation, the portion conventionally used by the consumer, the usual frequency of use, etc.

In general, these inhibiting agents should be employed in any effective amount up to five per cent by weight of the finished formulation. In practice, it will be found that amounts up to about four per cent will usually be sufficient, particularly for tooth powders and creams. A practical and commercially acceptable dental cream may be prepared within these limits, with optimum desired effects from a consideration of all factors usually dictating the use of any effective amount within the range of about 0.5 per cent to about four per cent active ingredient in the formulation. Best results, wherein the material is effective for an adequate period in the oral cavity and which is most conducive to a commercially acceptable dental cream, have been achieved with the use of about one to three per cent by weight. Excessive amounts substantially above five per cent are in general highly undesirable and substantially adversely affect the quality of such products. Products containing such excessive amounts possess, for example, a significant bitter fatty acid type or bite taste which has even resulted in refusal of a number of subjects to use the same. Furthermore, the undesirable taste cannot be sufficiently masked by modification or increase in sweetening or flavoring agents from the practical point of view and cannot, therefore, convert such a generally unsalable product into one which is practical and commercially acceptable to the public as a whole. Such products containing excessive amounts of active ingredients produce an inordinate amount of foam similar to frothing upon application in the mouth, thereby similarly rendering the product unaceptable for widespread acceptance.

Such excessive amounts have further been found to be highly detrimental in dental creams, resulting in a tendency to non-uniformity and non-homogeneity of the product, and instability upon aging or storage. These dental creams are generally an admixture of suitable abrasive or polishing agents and suitable liquids proportioned so as to form a smooth, homogeneous cream-like paste. It is requisite that they shall be free of separate or discrete lumps or particles and flow from the tubes under pressure without segregation or deterioration. The presence of excessive amounts of active ingredients therein results in a graininess in the product which is undesirable in appearance may even be palpable in the mouth. Furthermore, upon storage at elevated temperatures, there is an increased tendency for phase separation of a distinct liquid and a solid phase in contrast to a homogeneous cream, such that upon application of pressure to the tube there is extruded a liquid or foam, usually dark-colored, rather than a smooth paste. Such effects will vary in degree of course with the specific formulation but it is apparent that they similarly destroy the essential character of the dental cream as a smooth, homogeneous, stable, extrudible mass.

It is common to incorporate various adjuvant materials in oral preparations. The final dentifrice formulation may contain such materials in suitable amounts provided they are compatible with the active ingredient and the essential properties of the dentifrice preparations of the present invention. Added materials in the formulation which do not substantially adversely affect the properties and characteristics may be suitably selected and used in proper amount depending upon the particular type of preparation. Such materials may be used as soluble saccharin, flavoring oils (e.g. oils of spearmint, peppermint, wintergreen), coloring or whitening agents (e.g. titanium dioxide), preservatives (e.g. sodium benzoate, etc.), alcohol, menthol, etc., in addition to other added materials or the like which are described in the present specification.

Any suitable essentially water-insoluble abrasives or polishing agents may be employed in dentifrice preparations such as tooth powders, pastes, creams and liquids as an aid in general cleansing. Among such abrasives are calcium carbonate, dicalcium phosphate, tricalcium phosphate, aluminum hydroxide, insoluble sodium metaphosphate, bentonite, etc., including suitable mixtures thereof. In general, these materials will usually comprise the major proportion of the solid ingredients. The amount utilized is variable with respect to the abrasive effects desired and the particular type of preparation but usually will be from about five to 95 per cent by weight of the total composition and more particularly from about 20 to 75 per cent in a dental cream.

It is preferred to use in dental cream formulations in part or whole as the suitable abrasives calcium carbonate and calcium phosphates, preferably the latter type such as dicalcium phosphate, in view of their case of formulation and the obtaining of smooth consistency, body and stability in the dental cream.

(Continued on page 394)

Animal Health

Vitamin A for X Disease

According to a note in *Agricultural and Food Chemistry* (1:543, 1953) high dosages of vitamin A have been successful in pulling calves through X Disease, hyperkeritosis. The results of some recent research on the disease were reported at a recent meeting of the American Dairy Science Association. The relationship between vitamin A and X Disease is apparently still unknown. However, in cases where it was diagnosed at an early stage the vitamin seemed to help calves recover from hyperkeritosis. The investigators stressed the fact that vitamin A does not cure or prevent the disease.

Terramycin and Bull Semen

The control of bacteria in diluted bull semen is a matter of major concern in animal husbandry since such control may result in the increased semen fertility levels of some dairy bulls. The effect of the several antibiotics in adequate concentrations on sperm survival is of great importance and is the major criterion of the possible usefulness of such materials. The value of Terramycin for this purpose has been studied by O. T. Stallcup and H. K. McCartney (*Fertility & Sterility* 4:236, 1953). In their work the effect of Terramycin hydrochloride on the motility of bovine spermatozoa and on the control of bacterial growth of bovine semen diluted with citrate-buffered egg yolk and stored at 5° C. was investigated. It was found that 20 mg. of Terramycin hydrochloride could be added per 100 cc. of diluted semen without spermicidal effects. This level of the antibiotic was bacteriostatic and/or bactericidal. At a 25 mg. level, Terramycin was found to give better bacterial control than the 20 mg. level but had greater spermicidal action, as evidence by the decreased number of motile spermatozoa after given hours of storage. The 30 and 40 mg. levels were both bactericidal and spermicidal. Hence, on the basis of these results, concentrations of Terramycin higher than the 20 mg. level are not recommended in diluted bull semen.

Estrogen Pellets and Chicken Reproductivity

A. C. Akpinar and C. C. Shaffner (*Poultry Sci.* 32:119, 1953) have studied the effect of a single 15 mg. diethylstilbestrol pellet implanted into male and female chickens 63 days of age on their subsequent reproductive ability. Changes in body weight and comb size were recorded as well as egg production, egg size, and specific gravity of the eggs produced. The semen quantity and quality of the males was also recorded. The results indicated that the implantation had little permanent effect on the ultimate body size of either sex and that the ultimate comb size of the female was not affected while the combs of the treated males remained permanently smaller than those of the untreated males. The days to sexual maturity for the females was unchanged by the treatment, but the egg production, egg weight, and specific gravity of the eggs produced by the treated females were noticeably decreased.

The date of sexual maturity of the males appeared to be increased and semen quantity decreased by the treatment. However, the treated males produced some semen of good quality. In general, it appeared that the treatment was much more noticeable on the males than on the females.

Urea for Pregnant Ewes

In Bulletin 429, issued by the South Dakota Agricultural Experiment Station, R. M. Jordan points out that pregnant ewes usually require protein supplements during the winter. Since these supplements are generally the most expensive part of the ration, investigations are underway to find less expensive substitutes. Experimental work at a number of stations has shown that urea can be used as a partial substitute for common high protein feeds in the fattening rations fed to ruminants. Less information is available regarding the relative value of urea in rations fed to pregnant animals.

In the investigations described by Jordan the value of urea as a part of the protein supplement for pregnant ewes was studied during 1949, '50 and '51. The factors studied were (1) ewe gains, (2) fleece weight, (3) lambing percentage, (4) birth weight, (5) weaning percentage, (6) gain of lambs, and (7) relative value of wheat mids and dehydrated alfalfa meal in the supplement. The following conclusions were drawn from the experiment: 1. Protein supplements containing as much as 10 per cent urea caused no undesirable effects on the ewes and did not prove unpalatable. 2. Total gain made by the ewes, fleece weights, lambing percentage, weaning percentage, birth weight of the lambs and weight of lambs at 55 days of age were not affected apparently by the type of protein supplement fed (soybean meal or protein supplement plus urea) or level of urea in the supplement. 3. Ewes fed urea in protein supplements containing 75 per cent alfalfa meal gained more than when lower levels of alfalfa or wheat mids were fed. This was particularly true when 10 per cent urea was added. 4. Provided sufficient quantities of carbohydrates are fed, either five or 10 per cent urea may be added to a protein supplement without adversely affecting productivity.

Furacin-Penicillin Gel for Mastitis

A new dosage form of furacin and penicillin, furacin-penicillin gel, for treating bovine mastitis has been investigated by H. D. B. Roberts, J. C. Kakavas and E. S. Biddle (*N. Am. Vet.* 34:247, 1953). This gel consists of furacin crystals and penicillin G procaine crystals suspended in peanut oil with three per cent aluminum monostearate. One single-dose applicator tube of 7.5 cc. contains 150 mg. of furacin and 100,000 units of penicillin. The mixture is stable for at least one year.

In tests with this product a typical herd of dairy cows, with a high bacterial count of the milk attributable to mastitis, was treated with one or two courses of two or three injections of furacin-penicillin gel by intramammary infusion. Clinical cures were obtained in all cases, and permanent bacteri-

ologic cures in all but three treated quarters. Although these three treated quarters still showed infection with micrococci, the milk from these quarters appeared normal. The milk production increased and the official bacterial count of the milk dropped to the lowest ever recorded for this herd. No clinical signs of irritation from the medication occurred. Intramammary administration to a group of ten cows produced no significant increase in the leukocyte count of the milk from eithea normal or infected udders, also indicating that this preparation is nonirritating.

Fat and Amino Acids in Dog Diets

J. E. Campbell and P. H. Phillips (*Southwestern Vet.* 6:173, 1953) have fed puppies on diets with graded levels of fat replacing an equivalent percentage of the wheat flakes in their basal diet. Contrary to expectations, those pups receiving the basal diet, which contained 3.5 per cent fat, grew more than did those receiving diets containing added fat. The greater the amount of fat added to the diet, the greater was the effect on growth. The dogs on the high-fat diet ate less than the dogs on the basal diet. All types of fat used in the experiments produced the same effect on the growth of pups. When methionine was added to the high-fat (15 per cent added) diet, the pups on this diet grew as much as the pups on the basal diet. This showed that under the conditions of the experiment, the pups on the high-fat diets were receiving protein of inadequate quality. Essentially the same protein seemed adequate in the diet containing 10 per cent less fat (basal diet).

The investigators concluded that their experiments showed that the amount of fat needed by the growing puppy did not exceed 3.5 to 4.0 per cent. This would indicate that young, growing pups require no additional fat in their diets above that found in normal commercial feeds. Campbell and Phillips further concluded that a ration for dogs which contains added fat requires careful formulation of the amino acid composition to meet the dogs' requirements, or it requires a higher level of good quality proteins.

Of related interest are the findings reported by E. S. Rabajdek and P. H. Phillips (through *Science News Letter* 64:82, 1953). They observed that pups on a low, 12 per cent protein diet, supplemented with the amino acids, lysine and methionine, led to normal dog growth equal to that on a 20 per cent protein diet. Lysine alone with the low-protein diet allowed normal growth, but the addition of methionine made for more efficient use of the protein.

Inactivation of Animal Viruses

Fifteen animal viruses were checked by J. Mathews and M. S. Hofstad (*Cornell Vet.* 43:452, 1953) for viral activity after 16 hours' exposure to ethylene oxide (carboxide) under pressure. All viruses studied were inactivated when exposed in the moist state. When exposed in lyophilized form, the viruses of hog cholera, Rous sarcoma, vesicular stomatitis, Newcastle disease, feline pneumonitis, and mouse pneumonitis were inactivated. The nine viruses not inactivated in the lyophilized form included rabies, mouse encephalomyelitis, chronic respiratory disease agent, laryngotracheitis, fowlpox, vaccina, swinepox, infectious bronchitis, and swine influenza. Of these nine viruses the last five were inactivated when exposed on cloth after being dried over calcium chloride, while no conclusive results could be obtained using the identical technique on the other four viruses. Exposures of shorter duration indicated that four to eight hours' exposure sufficed to inactivate five selected viruses in the moist state. The lyophilized forms of two of these five viruses were also inactivated in four to eight hours. Thus, these preliminary experiments indicate that carboxide is effective for inactivation of certain species of pathogenic fungi.

Vitamins for Hock Disorder in Turkeys

Data have been presented by M. L. Scott (*Poultry Sci.* 32:670, 1953) which show that both niacin and vitamin E are required for prevention of the enlarged hock disorder in turkeys. Under the experimental conditions used, the minimum level of supplemental niacin required was approximately 20 mg. per pound of diet. In the presence of 20 mg. or more of supplemental niacin, approximately five mg. of added alpha-tocopheryl acetate per pound of diet prevented enlarged hocks completely while 2.5 mg. of added alpha-tocopheryl acetate per pound of diet appeared to be insufficient. However, when 2.5 mg. of alpha-tocopheryl acetate per pound of diet was supplied in the presence of either a fat-soluble anti-oxidant or one per cent of dried brewers' yeast, enlarged hocks were prevented completely.

These results indicate that the effects previously obtained from dried brewers' yeast in the prevention of this disorder are due to its high content of readily available niacin and to its anti-oxidant properties which appear to protect vitamin E in the diet and/or in the body of the turkey. The results showing that niacin and vitamin E together are effective in preventing the enlarged hock disorder of eight to 20-week-old turkeys, as well as that of young poults, provide further evidence that these two forms of the enlarge hock disorder are of similar etiology.

Treatment for Anestrum in Cattle

In the treatment of infertility in dairy cattle, says D. C. Lindley (*Vet. Med.* 48:263, 1953), anestrum is one of the problems that is often encountered. Several methods of treatment for anestrum that have been introduced include manual expulsion of the corpus luteum, injection of gonadotropins, and injection of estrogens. In cattle, manual expression of the corpus luteum and use of estrogens have been most widely practiced. This is especially true when the apparent cause of anestrum is said to be retained corpus luteum. The most commonly used estrogenic substance is diethylstilbestrol. However, recently other potent estrogenic substances such as estradiol cyclopentylpropionate (E.C.P.) have been introduced.

Using 120 cows as subjects, Lindley has made a comparison of the various methods for treating anestrum. The treatments used were manual removal of the corpus luteum, 25 to 50 mg. doses of stilbestrol, six mg. doses of E.C.P. and a control group which received only a rectal examination. E.C.P. produced a statistically significant higher percentage of cows in estrum within ten days after treatment than any of the other methods. Manual expression of the corpus luteum and stilbestrol also produced a significantly higher percentage of cows in estrum in the first ten days over the control group. E.C.P. again produced the highest percentage of conceptions within the first ten days, and had a highly significant lead over the other three groups. Manual removal of the corpus luteum had a significant advantage over the control group, but not over stilbestrol at the end of the 30-day period. No serious complications resulted from any of the treatments, but some further endocrine disturbances were noted in the stilbestrol group, and transient illness was observed following removal of the corpus luteum.

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Abreast Of The Markets

Interesting Developments Occur in Markets As Summer Nears End; Vanilla Beans Advance Again

In general, the markets continued in an exceedingly quiet tone last month, although there were very definite signs of activity stirring in various categories. Anise and cassia oils, of course, continued their extremely scarce condition, while clove oil, although still firm, appeared to be ready for a price reduction.

The citrus oils, one exception to the soft tone of the essential-oil market, were very much on the active side, as might be expected during the hot summer months. Lemon oil, in particular, was extremely hard pressed, with hardly any domestic material available, and very scanty supplies arriving from Italy. Orange oil is improving marketwise, for spokesmen believe the consumption will drop steeply this month. This oil, too, is quite limited in supply on spot, but no increase in price is expected at the present time.

The botanical field was very quiet all during August, but there were signs that much activity will develop in the very near future. Such items as ergot, gamboge gum, ipecac root and wahoo bark were becoming extremely firm toward the end of the month. In other respects, the botanicals were more quiet than usual, with scattered price changes noted in a few cases.

The most interesting development occurred in the fine chemicals market, where strong evidence of Germany's re-entry into the world chemical picture is building up. Owing to German production of such chemicals as theobromine and theophylline at a price much lower than the level in effect in the United States, the domestic market has been forced to lower its own figures. The competition from these foreign markets, according to authorities in the field, is building up to a formidable level.

Alcohol maintained its level of activity during the month, while glycerine had its first price reduction since last year, the unique feature of this price drop being that it first appeared in the synthetic material and was immediately followed in the natural glycerine. This is considered very important, for it shows that the synthetic product is competing very strongly with the well-established natural product.

Licorice Root Outlook Dim

The current price of licorice root extends between 40 and 42 cents, but the quality of the material has been very poor, say the dealers. If there is no improvement in the grade of root shipped from the origin, there may be a substantial price increase as a result of the impending shortage.

Vanilla Beans Firmer

The advancing trend in vanilla beans continued last month, with both Mexican whole and cut beans considerably higher. The former were being quoted between $5.50 and $5.75, while the cuts were between $5.10 and $5.20. There were no changes in the Bourbon beans, although sources reported that there were diminishing stocks of beans at the origin. This is causing the advancing price and it is also causing spokesmen in the industry to look for an extended period of firmness for a long time to come.

Total production figures of vanilla beans for 1952 have been released. Madagascar and Comores accounted for 1,015,228 pounds, which was a little less than the five-year average (1948 to 1952) of 1,019,948 pounds. Mexico produced 339,776 pounds last year, or 46,764 pounds below that country's average for the same five years.

Tahiti accounted for 418,658 pounds in 1952, which was 3,070 pounds less than the five-year average, while Japan produced 91,906 pounds, or 26,606 pounds more than the average for the same period.

Guadeloupe averaged 25,658 pounds during the five-year period, and Dominica, 46,289 pounds.

Lycopodium Reduced

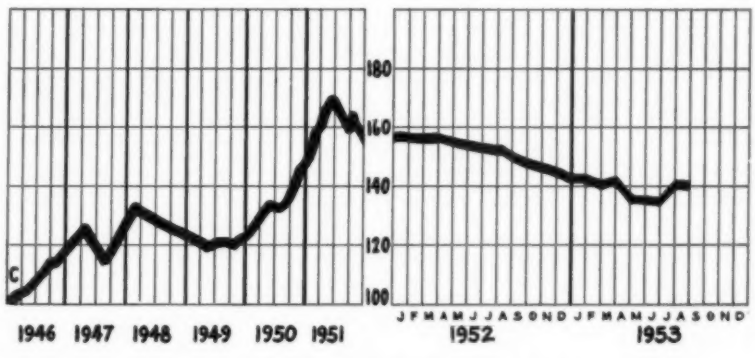
The price of lycopodium went down 10 cents to $1.30 last month, where the inside figure was expected to remain for the present time—or at least until the new-crop material begins to make its appearance toward the end of this year.

Agar in Tight Position

Although the price of agar last month was set at $2.25 to $2.40 for the No. 1

(*Continued on page 392*)

25 Cosmetic Raw Materials—Unweighted Price Index. 1926=100.



The cosmetic raw materials index declined slightly from 141.2 to 140.9. Balsam Peru, balsam tolu and glycerine were lower.

Prices quoted in this section were current on the first of this month.

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Glycerine Down 3½c, Alcohol Remains Steady; Theobromine and Theophylline Forced Down By Low-Priced German Exports

For the first time since the first production of synthetic glycerine, this material initiated a price reduction, amounting to 3½ cents a pound. All other reductions have occurred in the natural product first and then have followed in the synthetic material. Spokesmen believe this may indicate the growing importance of the synthetic product and that it may no longer be a stepchild to the natural glycerine, a by-product of soap manufacture.

The current price of glycerine is now 40½ cents a pound for U.S.P., refined. It has also been noted in recent months that the production of natural glycerine has been greatly affected by the synthetic detergents now on the market. With a reduced demand for soap, there has been a similar decline in the production of the natural glycerine.

No Change in Alcohol

The demand for ethyl alcohol continued on the same level as the previous month, but dealers were looking for an increased consumption of the item during the next two or three months.

On the fermentation side of the picture, blackstrap molasses is finding more and more use in the cattle feed industry. This means that the fermentation alcohol producers will find it increasingly difficult to obtain molasses on their own price terms because of the added competition.

The Alcohol and Tobacco Tax division of the Bureau of Internal Revenue, Treasury Department, last month released the following data on the supply, production, withdrawals and stocks of Ethyl, completely denatured and specially denatured alcohol during June, 1953, as compared with June, 1952.

	1953	1952
Production		
	Gallons	
†Ethyl	40,644,982	32,922,282
*Completely denatured	16,466	25,128
*Specially denatured	20,109,958	17,843,119
Withdrawals		
†Ethyl, tax paid	2,205,585	1,446,672
tax free	43,928,943	41,148,982
*Completely denatured	28,010	27,109
Specially denatured	23,281,293	17,990,691
Stocks		
†Ethyl	72,518,950	74,420,162
*Completely denatured	21,675	40,455
*Specially denatured	6,821,952	8,015,009

*Wine gallons. †Proof gallons.

Tragacanth Gum

Producers at the origin have advanced their prices by 10 cents on tragacanth gum; however, this has had no effect on the spot market as yet. The main reason is that there is such a small demand for the gum at the present time that a price increase is not warranted.

Carnauba Wax Higher

Carnauba wax advanced to $1.28 a pound last month, in spite of the fact that a large amount of material arrived on the spot market during the latter half. Consumers showed little interest in the wax following the arrival, and it appeared that the price may take a turn downward as a result.

Theobromine Competition

While theobromine is currently selling for about $3 in the spot market, there are reports of foreign material being offered at lower price levels, extending to $2.60 a pound. Up to the end of August, there had been very little change in consumption.

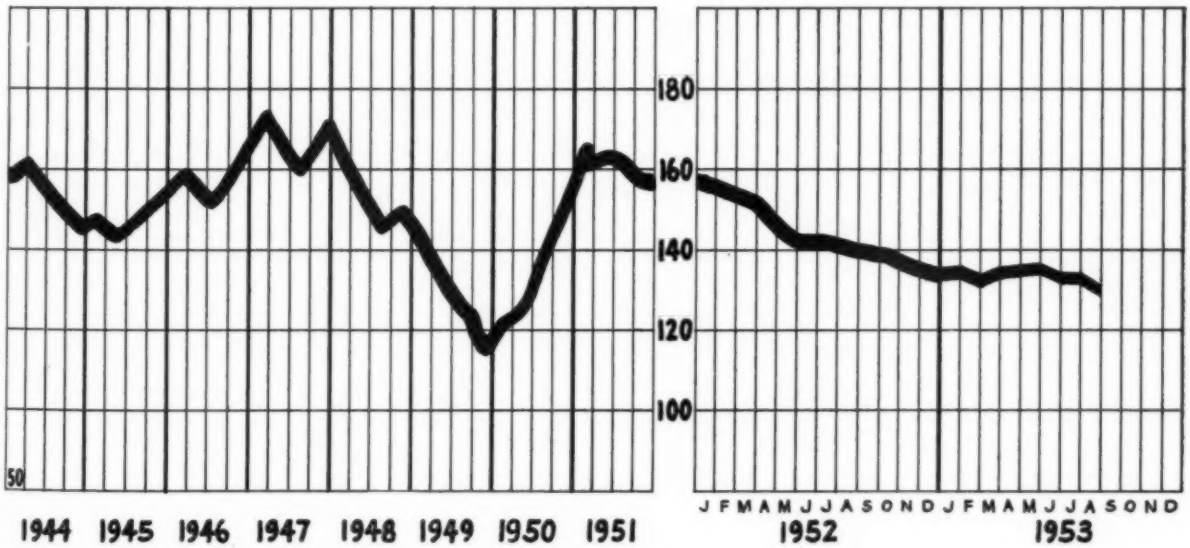
Theophylline Reduced

Emphasizing the coming importance of Germany as a post-war chemical supplier, producers of theophylline in the United States have found it necessary to reduce the price of their product to meet the foreign competition from Germany. The chemical was reduced by as much as $1.25 and now stands at $3.15 a pound.

Balsam Peru Reduced

Because of large supplies readily available at the origin, the price of balsam Peru has declined during the past month, and may continue to do so in the future. One botanical house reports the full-strength, uncut material at $1.30 to $1.35 a pound, depending on quality and quantity. At the same time, demand for this product has fallen off considerably in this

50 Raw Materials—Weighted Price Index. 1926=100.



The price index of fifty commodities for August went down from 132.4 to 130.1.

AUGUST PRICE CHANGES

UP

Carnauba Wax No. 1 2c
Cassia Oil, Redist. $1.25
Eucalyptus Oil 15c
Vanilla Beans, Mex. Cuts 45c
Mex. Whole 25c

DOWN

Almond Oil, Bitter 25c
Balsam Peru 5c
Balsam Tolu 5c
Cardamom Oil $1
Coriander Oil $1.50
Dill Oil 20c
Ginger Oil $1
Glycerine 3½c
Lycopodium 20c
Peppermint Oil, Natural 25c
Peppermint Oil, Redist. 25c
Spearmint Oil 65c
Theophylline $1.25

country, according to this source, and exports are not as heavy as they have been.

Cocillana Bark Firm

Because they are not able to obtain replacements in cocillana bark, several dealers have dropped it from their lists. What bark there is on the spot market has been selling for as high as 40 cents a pound.

Agar in Tight Position

(Continued from page 389)

grade, spokesmen indicate that an increase to $2.50 is expected for the whole material, and $3 for powder. Reports indicate that prices at the origin are advancing steadily, and this trend will soon be reflected on the spot market, especially since the spot supplies are at the present time the smallest they have been in a very long time.

Benzoin Gum in Doubt

Most of the benzoin gum which has been in the spot market has been selling at prices between 37 cents and 39 cents, but, according to authorities, this has been inferior material. Stating that U.S.P. gum must assay 75 per cent solubility, one source indicates that much of the low-price material is substandard. The proper price for full-strength material should be closer to 45 cents.

Chamomile Flowers Favorable

The outlook in chamomile flowers has improved immeasurably in recent weeks, for new-crop material has appeared on the spot market. The price of this good-quality botanical extends between 65 cents and 70 cents.

Wahoo Root Higher

Meagre stocks in wahoo bark of root caused prices of the material to advance considerably last month. By the last week in August, the range extended from $2.10 to $2.20. The wahoo bark of tree was higher also, ranging from 95 cents to $1.

Ipecac Root Tight

Although the price of ipecac root ranged between $5.75 and $5.90 in the latter part of August, spokesmen expected it to advance to a higher level because of a shortage of stocks.

Cohosh Root Supply Low

In order to attract laborers to pick cohosh root, prices have had to be advanced on the item, according to the trade, with the result that the range now extends between 25 and 27 cents a pound in some quarters.

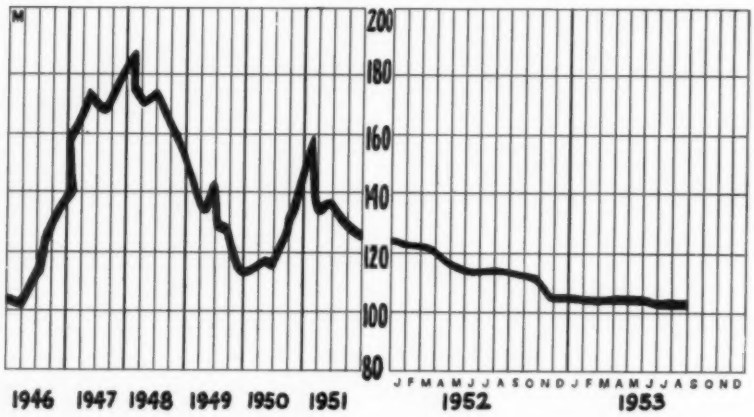
Papain Very Tight

Although there is some papain on the spot market, authorities advise caution in purchasing it because it may be inferior in quality. The lower-priced Ceylon material and the higher East African papain ranged from $6.25 to $7.50 a pound.

Sassafras Bark Firmer

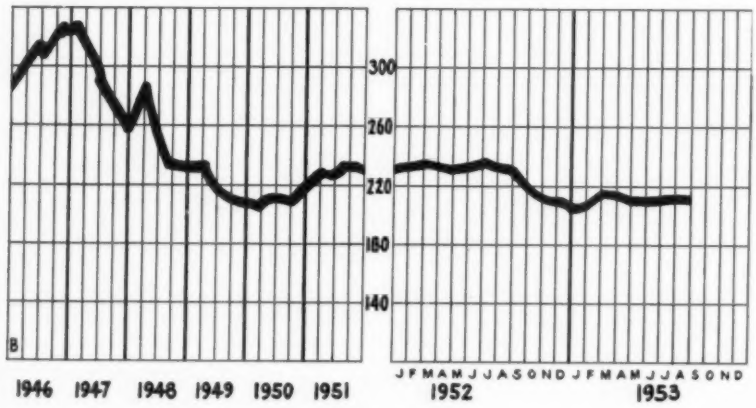
The finer grades of sassafras bark increased in price last month to 65 cents a pound. As a matter of fact, this is a continuation of the upward trend

15 Medicinal Chemicals—Weighted Price Index. 1926=100.



The medicinal chemicals index remained at 102.7. There were no changes.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index declined slightly from 211.8 to 211.4. Balsam tolu was lower.

which has been going on for several months in this bark, a trend that has been caused by poor collections of raw material. It appears that there will be a prolonged shortage in this material until replacements can be built up in dealers' hands.

Orange Oil Steady

Demand for orange oil continued to run high during August; however, now that the summer has ended, dealers expect it to taper off rapidly. The American cold pressed oil has been ranging between 90 cents and $1.75, and the American distilled, from 80 cents to $1.25. From all appearances, these ranges will continue as such for several months. While the demand will most certainly be much less next month, this will not soften the market, according to spokesmen, because there is a limited supply of orange oil on hand.

Lemon Oil Remains Tight

The price of California lemon oil continued to range between $7.25 and $7.65 a pound, and the Italian oil, between $6.50 and $9.50. The main reason for the decided firmness in the market was the small amount of oil coming out of California. Added to this was the fact that exports from Italy have been rather sporadic during the past few weeks, and the over-all supply has been reduced considerably on the spot market.

Spearmint Oil Reduced

Similar to peppermint oil, spearmint also declined last month as a result of new-crop influences. The oil ranged between $7.85 and $8 a pound. The new material will be reaching the spot market this month.

Peppermint Oil Higher

The price of peppermint oil declined during August, probably in anticipation of the new-crop material which is soon to arrive on the scene. The natural material was ranging between $5.60 and $6 a pound, and the redistilled, between $5.90 and $7.40. Spokesmen indicate that the new crop of peppermint oil is expected to be a large one, hence the desire to sell as much old stock as possible before the new material arrives.

Lemongrass Oil Remains Firm

While prices at the origin tended to advance in lemongrass oil last month, there was no parallel response in the spot market. The price has been holding at about $1.20 a pound, and dealers have showed no inclination to raise it at the present time.

Clove Oil Still Firm

Although there have been reports of a cut in the clove bud oil price, most of the essential-oil dealers last month placed the item in the range between $9.25 and $11. The general belief in the industry seems to be that a decline will occur in the not-too-distant future, provided the clove itself is reduced at the same time.

There is plenty of clove leaf oil available from Madagascar at a lower price level. Apparently the demand for the clove leaf oil has declined in recent months, and there are no ample stocks on hand.

Eucalyptus Oil Higher

Eucalyptus oil went up 15 cents last month to the range between 95 cents and $1.25 a pound. Dealers expect further advances in this oil as the summer draws to a close and consumers begin making replacements for the winter months in the preparation of pharmaceutical products.

Geranium Oil Firmer

Although there was no price change last month, some sources indicated there was a firmer tone in the geranium-oil market. This trend has been offset considerably by a very sluggish demand for the item up to the present time. On the other hand, there were reports to the effect that this year's distillation of Bourbon geranium oil has been completed. The 1953 yield is said to be lower than that of last year due to inclement weather. This may add to additional firmness later in the year.

Bois de Rose Unchanged

Bois de rose oil continued at $4.10 last month, with no expected changes in sight.

Any cassia oil that was to be had, according to these sources, was strictly reserved for regular customers, and even then, the amount sold was very limited.

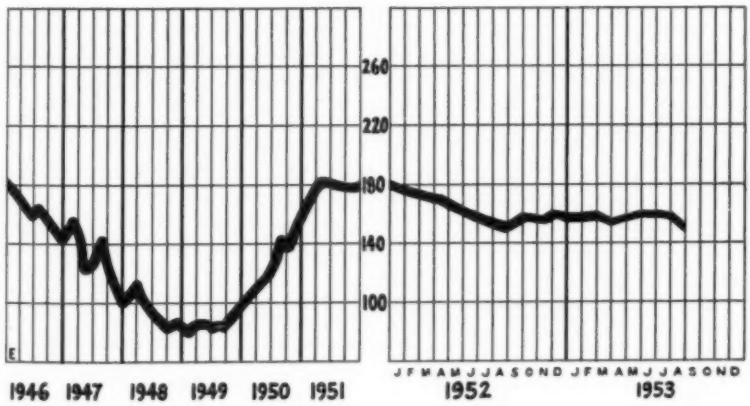
Bergamot Oil Steady

The price of bergamot oil remained in the range between $11.25 and $14 during August, with a few local fluctuations reported. The price at the origin, however, remained the same, indicating that there probably would not be any major price change in the oil in the near future.

Anise and Cassia Oils Tight

Both anise and cassia oils continued to develop an extreme firmness last month as a result of the ban on imports from Communist countries. The price of the anise oil held at $2.35 a pound, provided there was material on spot to be had. Similarly, the cassia oil price, which was nominal, hovered around $9.75 a pound. Spokesmen indicated that there was very little cassia oil available last month.

15 Essential Oils—Weighted Price Index. 1926=100



The essential oils index dropped from 157.0 to 149.3. Cassia and eucalyptus oils were higher; peppermint oil was lower.

Anti-Enzymes

(Continued from page 385)

In the preparation of tooth powders, it is usually sufficient to mechanically admix the various solid ingredients, the abrasives constituting the major amount, e.g. at least about 70 per cent. In dental cream formulations, the liquids and solids must necessarily be proportioned to attain a creamy mass of desired consistency. In general, the liquids will comprise chiefly such materials as water, glycerine, sorbitol, propylene glycol, including suitable admixtures thereof. There is included within the scope of the invention both water-free and glycerine-type-free creams. It is advantageous to use a mixture of both water and a humectant such as glycerine, sorbitol, etc. in view of a good consistency attainable therein initially and upon storage, the hygroscopicity and plasticizing action of the mixture preventing appreciable hardening of the cream, and aiding in maintenance of proper solubilization effects and relationships.

For optimum effects, the active ingredient should be suitably dissolved or dispersed in the liquid phase and the essentially water-insoluble abrasive maintained in suspension, the cream being gelled or set to maintain the mixture as stable as possible. The formation of a gel favorably affects the stability of the cream. Any suitable gelling agent or hydrophilic colloid may be employed which has the necessary swelling and setting action. The gelling agents are preferably the natural and synthetic gum and similar gum-like materials such as Irish moss, gum tragacanth, sodium alginate, gum karaya, pectin, sodium carboxymethylcellulose, starch, etc. Such materials as tragacanth glycerite or glycerite of starch which are essentially mixtures of glycerine and the mucilaginous substance are included herein. These gums will usually be employed in amounts up to about 10 per cent by weight of the dental cream, and about 0.5 - 5 per cent.

Dental Cream

As an embodiment of the present invention, a commercially acceptable and substantially uniform, homogeneous and stable dental cream having the essential property of acid inhibition may be prepared by suitable proportioning of the following ingredients within the specified ranges to produce a cream extrudible from a collapsible aluminum or lead tube or the like:

	Per cent
Active Ingredient	0.5-5
Water-insoluble abrasive	20-75
Liquid	20-75
Gelling Agent	0-10

Minor amounts of flavor, sweetener such as soluble saccharin, etc., will also be added usually. The liquid is preferably water, or a liquid humectant or excipient such as glycerine, sorbitol, etc., and suitable mixtures thereof, the total liquid content being usually in an amount from about 30 - 65 per cent by weight of the total ingredients. Preferred creams of the present invention which yield optimum results have the proportions below, the amounts in parentheses being highly desirable in commercial practice.

	Per cent	
Active Ingredient	0.5-4	(1-3)
Water-insoluble abrasive, preferably containing insoluble phosphate	30-65	(40-60)
Glycerine (or the like)	5-50	(10-40)
Water	5-50	(10-40)
Gelling Agent	0.1-5	(0.5-1.5)

The pH of the dental cream is variable and may be slightly alkaline or acid as desired since the saliva is a buffered medium. The pH of a 20 per cent aqueous slurry of the cream will be usually about five to about 10. It is preferred that it be substantially neutral, e.g. about six to eight, for optimum effects.

Other Oral Preparations

As previously indicated, mouth washes or rinses are also within the scope of the present invention. Such products are usually an effective amount of the active ingredient dissolved in a suitable flavored liquid vehicle, preferably aqueous alcoholic vehicle. While amounts of up to five per cent active ingredient may be used, it is desirable to use about 0.05 to about two per cent, and preferably up to about one per cent by weight. The alcohol concentration may vary depending on the mouth effect desired, such as about five to 70 per cent alcohol, and preferably five to 40 per cent. Liquid dentifrices are also included, such products usually containing larger amounts of active ingredients, e.g. 0.5 to five per cent, dissolved in an aqueous mucilaginous vehicle, optionally combined with small amounts of abrasive, alcohol, glycerine, coloring and flavoring materials.

A further embodiment of the present invention relates to chewing gum containing these active ingredients. The development of acid in the oral cavity by the action of bacteria fermenting the suitable carbohydrates in situ may also be inhibited by the mastication of chewing gum containing the above active ingredients in any suitable amount. During use of such chewing gums in the conventional manner, the active ingredient will usually be released slowly, thus facilitating its adsorption or effectiveness in the oral cavity. The usual masticatory action moreover tends to distribute the various ingredients throughout the oral cavity also, thereby enabling more wide-spread contact.

In general, the chewing gum will contain a minor but effective amount of the amide, such as up to about five per cent by weight. In practice, it will be sufficient usually to use suitable amounts up to a few per cent, e.g. three per cent, and preferably up to about one per cent by weight of the final gum product.

(Continued on page 396)

GUMS
(CRUDE, POWDERED)

- GUM ARABIC
- GUM ARABIC BLEACHED
- GUM GHATTI
- GUM LOCUST (Carob Flour)
- GUM TRAGACANTH
- GUM EGYPTIAN (Talha)
- GUM KARAYA (Indian)

CHEMICALS AND DRUGS:
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MENTHOL
(Crystals)
EGG YOLK
EGG ALBUMEN
BLOOD ALBUMEN
JAPAN WAX
QUINCE SEED

REPRESENTATIVES:
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for
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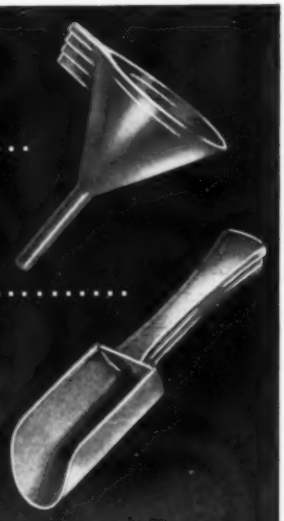

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(*Continued from page 394*)

The active ingredient should preferably be uniformly dispersed or distributed in or on the product. It may be incorporated in a warmed gum base with stirring to distribute the same, such as at the stage wherein sugars or flavors are usually incorporated therein. It may also be added to the exterior or outer surfaces of a gum base in order to cover the same by a substantially uniform coating, layer, or film of the active ingredient.

Any suitable chewing gum base may be employed in the present invention. There is a relatively large number of such materials known in the art. It is preferred that the gum base comprise chicle either in part or in whole in view of the excellent results obtained thereby. Other bases, however, both natural and synthetic, may be used including suitable mixtures thereof. Representative materials of natural gums are jelutong, pontianak, gutta katiaw, gutta soh, rubber latex, etc. Synthetic resins and the like may also be used as desired, including vinylite resins, non-toxic butadiene-styrene materials, etc., these polymers for such uses being well known in the art.

In addition to the gum base and active ingredient, other adjuvant materials may be incorporated in suitable amounts. Plasticizers or softeners known in the art are lecithin, lanolin, carnauba wax, candelilla wax, paraffin, beeswax, mineral oil, fatty oils (e.g. olive oil, hydrogenated coconut and cottonseed oils), glycerine, propylene glycol, fatty esters, e.g. glycerol monostearate, etc. Furthermore, flavoring oils, both natural and synthetic, (e.g. oils of spearmint, peppermint, birch, fruit, cinnamon, etc.) may also be incorporated as desired. Other materials, such as calcium carbonate, coloring agents, flavor fixatives, etc. may also be used as desired.

In addition, the chewing gum product will usually contain sugars or other carbohydrates such as glucose, sorbitol, powdered sugar, starch, corn syrup, or their equivalents to give the desired taste or other known effects, usually in substantial amount. Cerelose and mannitol have also been proposed as extenders of sucrose. If desired, these materials may be incorporated during manufacture in known manner.

The final product may be prepared in any suitable form such as the individual stick, bubble gum, candy coated gum, etc., in accordance with conventional practice.

The following specific examples are further illustrative of the nature of the present invention, but it is to be understood that the invention is not limited thereto. All amounts of the various ingredients are by weight unless otherwise specified.

Example I—Dental Cream

A suitable dental cream is prepared having approximately the following formulation:

	Per cent
Calcium carbonate	12.1
Dicalcium phosphate Dihydrate	36.2
Sodium N-lauroyl sarcoside	2.0
Glycerine	30.6
Water	15.3
Irish Moss	1.0

the balance consisting essentially of sweetening agent, flavor, preservatives, etc. The glycerine, Irish moss, water and the minor amounts of preservatives and sweetener are mixed and heated to about 170° F. to form a gel-like mass. The sarcoside is added with agitation to form a homogeneous mass, after which the polishing agents in powder form are incorporated similarly. After cooling and adding the flavoring material, the mass is milled, deaerated and strained to produce a smooth, homogeneous cream paste, which is subsequently added to collapsible aluminum or lead tubes. This dental cream has a substantially neutral pH value. Extensive testing involving both in vivo and in vitro tests shows that this dental cream exhibits the desired properties with excellent uniformity and homogeneity of the cream.

The above active ingredient has been specified as the amide per se for convenience of illustration. This active ingredient contains a minor amount of several per cent of sodium laurate.

Example II—Tooth Powder

	Per cent
Sodium N-lauroyl sarcoside	2.8
Saccharin, soluble	0.2
Flavor	2.0
Calcium carbonate	25.0
Dicalcium Phosphate Dihydrate	70.0

Example III—Mouth Wash

	Per cent
Sodium N-lauroyl sarcoside	0.1-0.2
Ethyl alcohol	10.0
Flabor	0.15
Saccharin, Soluble	.012
Distilled water	Q.S.

Example IV—Liquid Dentifrice

	Per cent
Sodium N-lauroyl sarcoside	2.0
Sodium Carboxymethylcellulose	4.0
Flavor	0.5
Water	Q.S.

Example V—Chewing Gum

	Per Cent
Gum base, e.g. chicle	20.0
Sucrose	60.0
Corn syrup	18.5
Flavor	1.0
Sodium N-lauroyl sarcoside	0.5

Claims:

1. An oral preparation for the care and hygiene of the oral cavity having as active ingredient in an amount up to five per cent by weight a higher aliphatic amide

of an amino carboxylic acid compound, said amide being characterized by its ability to inhibit acid production by saliva in a nutrient medium, and by adsorption of said amide by proteinaceous material.

2. An oral preparation in accordance with claim 1 wherein said amide is a higher fatty acid amide of a lower aliphatic amino monocarboxylic acid compound.

3. An oral preparation in accordance with claims 1-2 wherein said amide contains a fatty acyl radical of about 12 to about 16 carbon atoms.

4. An oral preparation in accordance with claims 1-3 wherein the active ingredient is an amide compound having the formula:

$$R\text{–}CO\text{–}N(R')\text{–}CH_2\text{–}COOX$$

wherein R–CO– is a higher saturated fatty acyl radical of 12 to 16 carbon atoms, R′ is selected from the group consisting of hydrogen and lower alkyl, and X is selected from the group consisting of hydrogen and water-soluble, salt-forming cations.

5. An oral preparation in accordance with claim 4 wherein R′ is methyl or hydrogen.

6. An oral preparation in accordance with claims 1-5 wherein the active ingredient is N-lauroyl sarcosine or its water-soluble salts.

7. An oral preparation in accordance with claims 1-5 wherein the active ingredient is N-myristoyl sarcosine or its water-soluble salts.

8. An oral preparation in accordance with claims 1-7 wherein said active ingredient is in the form of an alkali metal salt.

9. An oral preparation in accordance with claims 1-8 wherein said active ingredient is used in an amount from about 0.5 to four per cent by weight.

10. An oral preparation in accordance with claim 9 wherein the active ingredient is used in an amount from about one to three per cent by weight.

11. An oral preparation in accordance with any of the preceding claims which contains a water-insoluble polishing agent.

12. An oral preparation in accordance with claim 11 wherein said polishing agent is at least in part a water-insoluble phosphate polishing agent.

13. An oral preparation in accordance with any of the preceding claims wherein said polishing agent is selected from the group consisting of calcium carbonate, dicalcium phosphate and sodium metaphosphate.

14. An oral preparation in accordance with any of the preceding claims wherein said active ingredient is a condensation product of a higher fatty acylating compound and an amino acid compound, said condensation product being substantially free from higher fatty acids or soaps.

15. An oral preparation in accordance with claim 14 wherein said condensation product contains less than about 15 per cent of higher fatty acids or soaps.

16. An oral preparation in accordance with claim 15 which contains not substantially above five per cent of higher fatty acids or soaps by weight of said amide.

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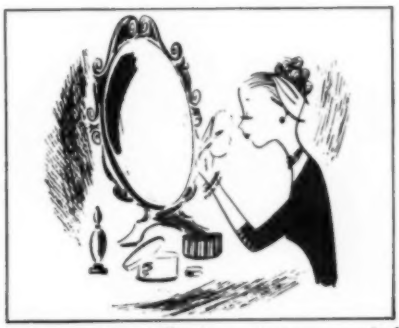

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17. An oral preparation in accordance with any of the preceding claims which is in the form of a dental cream.

18. A dental cream in accordance with claim 17 wherein said dental cream contains a gelling agent.

19. A dental cream in accordance with claims 17-18 which has the following formulation:

	Per cent
Active Ingredient	0.5-5
Water-insoluble abrasive	20-75
Liquid	20-75
Gelling Agent	0-10

20. A dental cream in accordance with claim 19 which has the following formulation:

	Per cent
Active Ingredient	0.5-4
Water-insoluble abrasive containing insoluble phosphate abrasive	30-65
Glycerine	5-50
Water	5-50
Gelling Agent	0.1-5

21. An oral preparation in accordance with claims 1-16 which is in the form of a toothpowder.

22. An oral preparation in accordance with claims 1-16 which is a mouth wash.

23. An oral preparation in accordance with claims 1-16 which is a liquid dentifrice.

24. An oral preparation in accordance with claims 1-16 which is a chewing gum.

25. An oral preparation substantially as herein described.

S. African Patent No. 17041

This was issued as a patent of addition to No. 16272. Its purpose was to render dental creams made in accordance with No. 16272 more stable. This object was accomplished by the incorporation of a calcium or magnesium ion suppression agent along with calcium and magnesium polishing agents.

Examples of calcium and magnesium ion suppression agents are calcium and magnesium sequestering agents and chelating agents. The water-soluble polyphosphates are preferred.

Any of the conventional calcium and magnesium abrasives employed in dental creams can be used. Typical examples include calcium carbonate and magnesium oxide.

A specific example taken from the patent follows:

Example—Dental Cream

A suitable dental cream is prepared having approximately the following formulation:

	Per cent
Calcium carbonate	12.1
Dicalcium phosphate dihydrate	36.2
Sodium N-lauroyl sarcoside	2.0
Disodium diacid pyrophosphate	1.0
Glycerine	30.6

	Per Cent
Water	15.3
Irish moss	1.0
Sodium saccharin	0.15
Sodium benzoate	0.5
Flavor	Q.S.

The glycerine, Irish moss, water, saccharin and the minor amounts of preservatives including the pyrophosphates are mixed and heated to about 170° F. to form a gel-like mass. The sarcoside is added with agitation to form a homogeneous mass, after which the polishing agents in powder form are incorporated similarly. After cooling and adding the flavoring material, the mass is milled, deaerated and strained to produce a smooth, homogeneous cream paste, which is subsequently added to collapsible aluminum or lead tubes. This dental cream has a substantially neutral pH value. Extensive testing shows that this dental cream exhibits the desired stability and maintenance of the acid-inhibiting and other desired properties even after long periods of time, with a high level of foaming power.

RECENT PATENTS

2,642,431—**Smith, Kline & French Labs.—1-Keto-3-Butyl-4-Hydroxy-1, 2, 3, 4-Tetrahydroisoquinoline.**

2,642,433—**Hoffmann-La Roche—Alpha-Amino-Alpha, Alpha-Diphenylacetic Acids.**

2,642,438—**Hoffmann-La Roche—Pyridindoles.**

2,642,441—**Wisconsin Alumni R. F.—2-Methyl-4-Phenyl-5-Oxo-Gamma-Pyrano (3, 2-c) (1) benzopyran.**

2,642,446—**Nopco—Production of 7-Dehydrosterols.**

2,642,450-1—**Merck—Thiolurethane Quaternary Ammonium Compounds.**

2,643,197-8—**Lever Bros.—Fluorescent-Detergent Compositions**

2,643,209—**Chas. Pfizer—Vitamin A Acetate Gelatin Breadlets.**

2,643,210—**Merck—Vitamin B_{12}-Active Substance Elution from Montmorillonite Absorbent.**

2,643,213—**U. S. A—Production of Vitamin B_{12} By Streptomyces Olivaceus**

2,643,229—**N. M. Walters—Monsoap Synthetic Cake Detergent.**

2,643,249—**Mathieson Chem.—Obtaining Crystalline Salts of Streptomycins.**

2,643,251—**Bristol Labs.—Precipitation of Fine Particle Procaine Penicillin G.**

2,643,257-9—**Parke, Davis—Substituted Succinimides.**

2,643,967—**Wallerstein Co.—Tyrothricin Concentrate.**

2,643,968—**Am. Cyanamid—Recovery of Vitamin B_{12} with Monohalophenols.**

2,643,970—**Syntex S. A.—Process for Production of**

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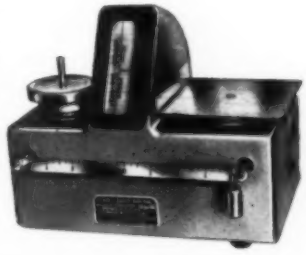

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2,643,997—**D. L. Johnson—Isolation and Purification of Streptomycin Phosphate.**

2,643,998—**Eli Lilly—Antibiotic Solutions Stabilized with Thio-glycerol, sorbitol, and-glucose.**

2,644,010—**Merck—Salts of d-Amidone with an Optically Active Acid and Process for Resolving dl-Amidone.**

2,644,012—**Upjohn—4-Substituted Vinylcyclohexenes.**

2,644,816—**Mathieson Chem. Corp.—Purification of Antibiotics with Water Insoluble Carboxylic Acids.**

2,644,817—**Merck & Co.—1-Glycosido-5, 6 Dimethyl Benzimidazoles.**

2,644,836—**Research Corp.—1, 1-Disubstitution Products of 2-Tetralones.**

2,644,843—**Merck & Co.—Alkylation of Arylmethyl Methyl Ketones.**

2,645,594—**Abbott Labs.—Antiseptic Acridane Compounds.**

2,645,595—**Charles Marchand Co.—Compositions For Tinting Hair.**

2,645,618-47—**Technican Chem. Co.—Clearing Agents for Histological Tissue.**

2,645,637—**National Research Dev. Corp.—Synthesis of Adenosine-5'-Triphosphate.**

2,645,638—**Commercial Solvents—Penicillin Salts of N-Methyl-(2-Hydroxy-1, 2-Drchenylethyl)-Amine.**

2,645,639—**R. C. A.—Crystalline Penicillin Salts Process.**

2,645,666—**Upjohn — Haloethylhydrocarbonoxy-cyclohexenes.**

Drugs in Satellite Countries

(*Continued from page 325*)

an ounce). Streptomycin and PAS are also very difficult to come by. Until the middle of 1952 they could be bought on the black market, but are no longer available even from that source.

Penicillin was available in sufficient quantity until 1947. Supplies at that time consisted chiefly of UNRRA shipments. After 1947 foreign-made penicillin appeared periodically, but after 1949 it disappeared completely from the market. Then Soviet-made penicillin of poor quality began to appear in drug stores and hospitals. Domestic production was started in 1951 and small quantities, although only 30 per cent as strong, were available in drug stores. Then the drug again disappeared and is now rare. State distributors have informed medical personnel that the drug should be prescribed only in exceptional cases and in small amounts, and recommend the use of substitutes such as sulphametazin and other sulfonamides.

The use of penicillin is further controlled by a regulation introduced in 1951 which requires the physician prescribing the drug to submit his diagnosis and address, along with the address of his patient, to a special commission. As a result doctors hesitate to prescribe scarce drugs, and persons desperately in need of such drugs are often forced to go to considerable lengths to obtain them.

Prior to 1950, hormone preparations were not generally produced. Those manufactured were of inferior quality and doctors avoided using them. Necessary extracts were bought on the black market. The same situation prevails today. For the time being, liver extracts produced in such places as Jelenia Gora are not equal to those made abroad, which are no longer obtainable on the black market.

Heparin and Dicumerol, used to treat thrombosis, could never be bought in drug stores. Until 1950, they could be purchased on the black market at a cost between 40 to 60 dollars for an amount needed to effect a cure. Now they are difficult to get even there. If someone receives a gift of these two drugs from abroad, he must report it immediately to the proper authorities and sell the drugs to the State pharmacies. Similar regulations apply to streptomycin, Chloromycetin, the sulfas, etc., even though these first two are produced domestically.

Distribution of medicines to State pharmacies and hospitals is controlled by the State Pharmaceutical Central, which is a division of the Ministry of Health.

It is reported that high State functionaries, Party dignitaries and their families receive medical care in special clinics operated by the Ministry of Health or in well equipped ambulatories, while the bulk of the population is serviced in public hospitals which are inadequately equipped and insufficiently supplied with medicines.

Import

Before nationalization, pharmacies sold medicines smuggled into the country from Germany as well as those acquired through the receipt of gift packages from the West. This peculiar form of import played an important role in supplying the country with needed medicaments. It even enriched pharmacists through subsequent price rises. Penicillin, streptomycetin, Vitamins B_6 and B_{12}, etc. were all available at "quoted" market prices. Now, in spite of published lists of products and directives governing their distribution and use, shortages are reported from every part of the country. And Poland's new partners in trade are in no position to satisfy her present need.

Advertisements regularly appear in the papers proclaiming: "Wanted, Streptomycetin," "Wanted, Antystin," "Vitamin B_{12} Wanted," etc. Foreign-made drugs shipped to Poland from the West, as gifts, fetch as much as 1,600 *zlotys* (40 dollars) for one million units of penicillin.

The Department of Supplies of the Ministry of Health has no influence in planning the import or

domestic production of drugs. Finding itself in an awkward position, the department decided to tap gift parcels from abroad. On March 22, 1952, a disposition of the Ministry of Health appeared "concerning the acquisition of some pharmaceutical items from gift parcels." The purpose of this disposition was to legalize the sale of drugs received from the West and to encourage their continued reception. The list attached to this disposition names 201 items. Shortages are underlined by the fact that no minimum has been set on the amount of medicines and drugs which can be sold to State pharmacies. The regulation merely stipulates that the wrapping should be original and intact.

In spite of all these difficulties, *Trybuna Ludu* wrote on January 10 that pharmaceutical supplies produced in Poland are now being exported abroad, which probably means China and North Korea.

Romania

In 1938, the import of medical supplies and drugs into Romania amounted to 620,186,000 *lei* or 3.3 per cent of the total import for that year. Supplies came chiefly from Germany, France and the United States. At the same time, supplies and drugs of almost equal monetary value (counting cosmetics) were domestically produced.

Prior to 1944, the most important pharmaceutical industries were affiliated with such international organizations as Bayer, Dr. Wander, Standard, I. G. Farben, etc. But the independent Beyersdorf, Chlorodont, Hygea, G. Richter, Odol-Pharma, Vorel and Gea-Krayer factories produced most of the drugs needed.

After September 1944, the Russians seized approximately 80 per cent of available stocks held by both civilians and the military, with a value (according to provisional reports received by the Romanian Foreign Office in 1946) of almost two billion (1944) *lei*.

The Russians also took over all chemical and pharmaceutical enterprises in which German nationals held stock. These factories were the largest and best equipped in the country. They have been run ever since as extra-territorial Soviet enterprises, and are exempt from taxes and fees as well as from Romanian laws. Their products are either exported to the USSR or sold on the Romanian market as Soviet goods.

Present Needs

In spite of a decrease in population (brought about by territorial changes) from 20 to 16 million, the volume of medicines and drugs needed is greater than the amount necessary before the last war. As the result of malnutrition, overwork and nervous strain, the proportion of people suffering from TB, stomach ulcers, nervous diseases, etc. has risen considerably. During 1951, in a single region containing 250,000 inhabitants (Mures), no less than 36,000 persons became infected with TB and were placed under cure, while an additional 40,000 were vaccinated against the Kolch bacillus. The largest proportion of victims were children.

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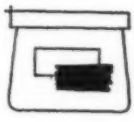

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The number of people suffering from anemia is alarmingly high, and physical resistance generally low. But, synthetic vitamins necessary to replace those normally obtained from food are not available. Such important drugs as penicillin and neosalvarsan are not being manufactured, and the supply from West Germany was cut off in 1945.

Production

Except for sporadic imports of small quantities of medicine from Switzerland, imports from the West have completely ceased due to the lack of foreign currency. The little import remaining comes from East Germany and the USSR. Consequently, home industries must increase and diversify their production.

Last January the newspapers announced that the production of medicines and drugs during 1953 will reach the level originally planned for 1955. It is also claimed that factories are manufacturing 350 items never produced before, such as aspirin, glucose, calcium glucoside, sulfonamides, salicylic acid, PAS, phenacetin, vitamins and various antibiotics.

Among production facilities still in Romanian hands are the Cantacuzino Institute in Bucharest, which chiefly prepares serums and vaccines; Medicine Factory No. 2, which produces liver extract among other things (processing is very difficult however, as the plant lacks adequate installations); Medicine Factory No. 7, which manufactures Vitamin C, adrenaline, novocaine and a stabilizing solution which adequately replaces the matron bisulfite formerly imported from the West; and Medicine Factory No. 3, at Cluj, which puts out standard medicines.

Research for the Romanian-owned pharmaceutical industry is done by the Chemical-Pharmaceutical Institute of Bucharest, under the supervision of the Romanian Academy of Sciences. In the spring of 1952 it was claimed that this Institute had succeeded in "synthetizing" a drug called "Rimifon," which is supposedly superior to streptomycin. It was also claimed at that time that Romanian factories had produced "an appreciable number of difficult syntheses" such as chloramine, sulfanilamide, Vitamin K, histidine, diodtyrosine and paramino-salicylic acid. Substitutes for Digitaline K and for medicines used in the treatment of angina pectoris, arteriosclerosis, etc. were also mentioned in the press.

The Societ-owned factories are known to produce a greater variety of medicines and drugs, as their facilities are better. Many Western patents are developed in their laboratories and later claimed as Soviet discoveries. For instance, the TB drug "Nydrazid," which was developed by the United States, is being made in such Soviet-owned Romanian laboratories as "Tabecalm."

Quality

Drugs are manufactured and marketed according to formulae supplied by the Ministry of Health. Standard drugs are prescribed for whole groups of related diseases, and only one is available where many were thought necessary in the past. The formulae do not differ from those formerly used, but their quality is reported to be very poor due to incompetent druggists and substitute ingredients.

To combat the scarcity of raw materials, the cultivation of medicinal plants has been greatly expanded. It is officially claimed that Romania will soon become second only to Russia as the greatest producer of medical herbs in Europe. Activities are under the control of the government which acts through its agency, Plafar, an organization which supervises the cultivation, processing and distribution—including exports—of medical herbs.

Distribution

All pharmacies, distribution centers and chemical enterprises were nationalized by law in June 1948 and the distribution of medical supplies placed under State control. Distribution is carried out via the organization O.F.I.F., which operates chiefly in urban and industrial centers.*

The quantity of medicines and drugs available to the people at present is no more than one-third the prewar supply. Only 60 standard drugs are sold in State pharmacies, compared to 5,200 varieties offered before the last war.

The distribution of penicillin has been under the direct control of the Health Department of the local Soviet since January 1951. It can be found in only 12 pharmacies in Bucharest and can be bought only when the doctor's prescription has been approved by the local Soviet.

In 1951, the government built an experimental plant near Sinaia for penicillin produced according to Soviet methods. Apparently, it was a failure, as it has been completely dismantled and a new factory is reported under construction somewhere in Moldavia (probably at Iasi), for which the Soviet Union will supply the major installations. Production is planned to cover all domestic requirements.

Streptomycin is so scarce that physicians may prescribe it only for children, and then only in desperate cases.

It is reported that Western medicines are not available in hospitals accessible to the average working man and his family, although they can be obtained in a number of special hospitals reserved for card-carrying Party members. Prior to the ban on imports from the West, these hospitals were supplied by the confiscation of 20 to 25 per cent of incoming medicines as "payment in kind" on customs duties, and from the obligatory sale to the State (at "official" prices) of a fixed quota of these same medicines. Lately, many of these hospitals are being supplied with items smuggled onto Romanian ships stopping in Western ports.

*Rural distribution is supervised by the People's Councils, *i.e.* the local Societs.

Imports

Some medical products of good quality have been imported from East Germany. But such imports have recently diminished, leaving the USSR as the chief foreign source of medicines and drugs. However, even Soviet products have become scarce. Soviet production was never designed to exceed domestic requirements and the Satellite countries have been constantly encouraged to produce their own medicines and drugs.

Of those Russian-manufactured drugs available in Romania, tuberculin and novocaine are reported to be particularly poor in quality. Soviet penicillin is scarce, yellow in color and reportedly poisonous. The latter charge does not appear to be true, but the drug has proved ineffective. The Soviet substitute for neosalvarsan, called "arsphenamine," is even more to be avoided as its use has resulted in a high proportion of deaths. Such deaths may be due to imprecise directions for administering the drug as well as to its variable arsenic content.

Czechoslovakia

Drug production in pre-war Czechoslovakia was excellent, with a number of enterprises putting out drugs of superior quality. Many large foreign companies maintained representatives in the country, and some owned plants which produced their brands. All drugs were available. Those not in stock were imported from abroad. American and English insulins were on the market immediately after they were produced in those countries. Domestic production took care of the demand for most drugs and was equal to world standards. Under the German occupation, high quality German and Swiss drugs were available wherever domestic manufacture was insufficient.

Almost all biological drugs (serums and vaccines) were made by the State Health Institute in Prague. Others were imported from Germany and Austria. Some hormones were also manufactured. There was large-scale export of pharmaceutical products. The State Institute had a large department producing drugs for the treatment of allergies, and every kind of autovaccine was prepared there.

After 1945, many American drugs such as penicillin, the sulfas, Dioumarol and blood plasma were imported by UNRRA. A short time afterward dioumarol was put on the market under the name "Pellenan-Rapid." Up until the Communist coup all foreign drugs were available, although prices were high.

Like all other Czechoslovak industries, the pharmaceutical industry was nationalized and a drop in production followed. The 1951-52 plan omitted Vitamin B tablets and injections and none have been available since the beginning of 1952. Sulfonamides, penicillin and streptomycin have also disappeared from the market, the latter two being available only in hospitals.

By a decree issued by the Ministry of Health in accordance with the Ministry of Finance on March 27, 1952, three national enterprises for the production of

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drugs were set up as of March 31 of that year: Penicillin National Enterprise*, located in Roztoky near Prague; Biogena (antibiotics), in Prague; and Lecive Rostliny (medicinal plants), at Zbraslav on the Vltava. The preparation and distribution of drugs, sanitary materials, etc., is entrusted to 19 enterprises in various parts of the country, all of which carry the name Medika, with the additional designation of their geographical location.

There are two other national enterprises called Sanitas, located in Prague and Bratislava, which pack and distribute imported and other special drugs, sanitary materials and optical goods.

A Special State Institute for the control of drugs was established in Prague, with a branch in Bratislava, in April 1952. Its chief job is to control and examine the quality of drugs, to carry on research in the field of drug control, and to train health workers in drug control.

Production

On April 2, 1952, *Rude Pravo* (Prague) claimed:

"Workers at the Sopfa Works in Olomouc have succeeded in producing three important drugs which formerly had to be imported for hard currency. One of the drugs is used in treating gastric ailments, the second is a sedative and the third is Vitamin C. All are being made from domestic raw materials or materials imported from the USSR. . . . The new drugs are equal to foreign ones and are even superior. . . ."

Another report, published by *Rude Pravo* on January 10 of this year, stated that an anti-tuberculosis drug called PAS "is now being made in Czechoslovakia in tablets, and dry injections and manufacture as an ointment are being considered." The paper also claimed that there is sufficient production of insuline, chloromycetin, pelentan (used to combat coagulation of the blood in cases of thrombosis, inflammation of the veins, etc.)

On June 22, the same newspaper reported the discovery of a new antibiotic:

"Dr. Otakar Smahel and Milos Herold recently announced success in creating a new antibiotic: perocilin.

"Perocilin has proved to be more effective than penicillin in the treatment of certain diseases and has the added advantage that it can be given in tablet form rather than by injection . . . making the patient less dependent on medical personnel. It can therefore be used more extensively. . . ."

Further information regarding this new drug was released by the *Prague News Letter* (in English) on July 4.

"[Perocilin] can also be used with penicillin. For example, in cases where penicillin has been prescribed,

*This plant, which was supplied with modern equipment by UNRRA in 1946, is the only plant producing penicillin in Czechoslovakia. Efforts to extract penicillin in a purified form have so far been fruitless; the product is not soluble in oily liquids, and must be kept on ice. Of the one billion units produced, nine-tenths are exported to the USSR, the rest going to the population of Czechoslovakia (which actually requires three billion units).

perocilin tablets may be given to offset the danger that arises when large numbers of microbes . . . adapt themselves to the penicillin and do not perish. When perocilin tablets are used in conjunction with penicillin, development of microbe resistance is prevented. Perocilin is also of value in preventing the development of such diseases as rheumatic heart. . . .

"The tablets are manufactured by the Roztok Penicillin plant which is also responsible, in co-operation with the Charles University medical school in Prague, for the perfecting of Czechoslovak penicillin."

Svobodne Slovo (Prague), July 8 announced that:

"The operation of the first Czechoslovak factory for the production of streptomycin has just been started. The product has been subjected to the most rigorous analytical tests which have shown that it is satisfactory from both the chemical and pharmacological point of view. Its effect has been successfully tested in our clinics. Manufacture will be increased so that we should be self-sufficient in the near future and entirely independent of imports."

Penicillin itself is no longer imported, and the penicillin factory at Roztoky has recently been enlarged. The manufacture of penicillin in tablet form is in preparation. Preparations in crystalline and ointment form are being made "in sufficient quantity to allow for export." Quality is claimed to be high and raw materials are of domestic origin. The plan for 1952 was fulfilled in November of that year and this year the plan exceeds that for 1952 by "170 per cent."

The treatment of syphilis by penicillin is forbidden, because such large quantities of the drug are required to effect a cure. Between four to six hundred thousand units are allotted for cases of pneumonia, which requires 1,200,000 units for proper treatment. Parcels from abroad containing penicillin or streptomycin are seized, and most of their contents confiscated.

Distribution

Drugs are provided free of charge to members of the national insurance system (*Rude Pravo*, December 15, 1951). But the same newspaper suggested later in the month that this practice might have to be revised:

"The question of charging for drugs has been the object of careful consideration. In the Soviet Union, insurance bearers have to contribute a certain amount toward the cost of drugs prescribed for them. Therefore, it can be assumed that this method will be introduced here too. Especially as the cost of drugs is increasing. . . ."

Antonin Zapotocky expressed annoyance over drug wastage, in a speech printed in *Rude Pravo*, May 16, 1952:

"The situation . . . is most unhealthy. Because they are supplied free of charge, there is real gambling and wasting of drugs. At the present time, we are spending five billion *koruny* a year . . . and rank first in drug consumption. . . . Consumption increased 150 per cent over 1946 and 1949, and 200 per cent in

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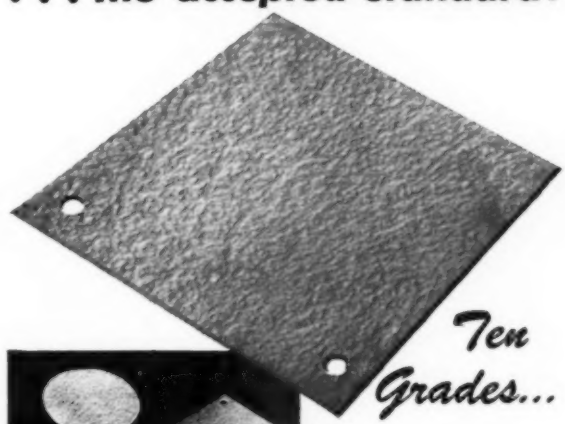

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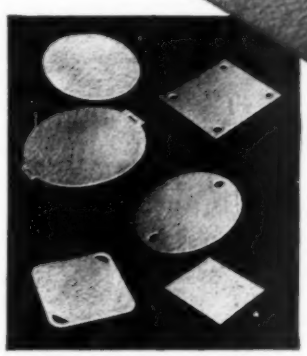

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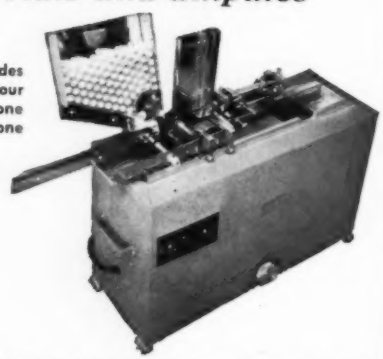

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1951. . . . One is amazed to see how many things are being prescribed by the doctors, and how many drugs the patient is able to stuff himself with. Loads of drugs, pills, drops, etc., go unused, [spoil] and are being thrown away. . . . We neglect the collection of herbs which can be grown here. Last year, we planted ergot which has never been harvested. Camomillae had to be ploughed under . . . although dry camomillae was unavailable throughout the country."

In January of this year, *Nova Praha* reported the continued fight against waste.

"Employees of the Regional National Health Institute in Prague have understood fully the appeal to fight against the wasting of drugs. . . . This fight has resulted in savings of one billion *koruny* during 1952. . . . At the National Health Institute, drugs are prescribed only after medical examination and never upon the claim of the patient. As a result, expenses for drugs in Prague have been considerably reduced. . . ."

Two weeks later the same paper complained of continued waste in spite of the efforts of the National Institute.

"The drug shortage in Prague is constantly increasing. We desire to provide everyone with good treatment without charge, but the unexplained increase in drug consumption proves that there must be waste. District offices . . . in Prague consumed 277 million *koruny* worth of drugs from January to October 1952 and hospitals consumed drugs valued at 64 million *koruny* during the same period. . . . In order to prevent waste, the National Health Institute checks expenses for drugs in hospitals and health institutes every month, and advises pharmacies to inform doctors in their district as to their supply."

Imports

Imports have been cut down to a minimum (in January, *Rude Pravo* stated that they constitute only five per cent of total imports), and the soliciting of gifts from the West is discouraged. Drugs are still imported from East Germany, Denmark and Switzerland, and up to 1952 trade agreements with the USSR mentioned reciprocal deliveries. No official mention has been made of the use of Soviet drugs, but private reports state that they are being used and that their quality is poor, especially in drugs used to fight tuberculosis.

As in the other Satellite countries, drugs received from abroad are held by the customs until the recipient presents a doctor's certificate countersigned by the local National Committee stating that the drugs are necessary. Any amount in excess of the recipient's requirements must be turned over to the State.

Bulgaria

Before the Second World War, the chief manufacturer of drugs in Bulgaria was the Galenus Pharmaceutical Company, which in most cases prepared tablets from materials imported from abroad. There were also a few small enterprises which prepared drugs from

imported raw materials. Now, all production is nationalized and operates under the direction of the Ministry of Public Health.

The main sources of imported medicaments before the war were Switzerland and Germany. After the war, antibiotics were imported mainly from Western Europe and the United States. There is no local production of penicillin, streptomycin, etc. and at present they are bought from the other Satellites and the USSR. The quality of these drugs is not as good as those manufactured in the West.

Production

A series of articles appearing in the press boast of achievements realized since the nationalization plan went into effect.

Rabotnichesko Delo (Sofia), September 1, 1950:

"The workers of the Galenus Factory in Sofia are already producing a great number of the basic materials used in manufacturing different drugs. . . . Valuable drugs such as codeine, morphine, santonin, ergotanin, alkaloids from belladonna, calcium phosphate, etc., are obtained from our herbs. . . . As of July 31, the plan for 1950 is fulfilled 65.88 per cent. Workers engaged in the preparation of tablets are in the lead. They have fulfilled the plan 72.72 per cent."

Vecherni Norini (Sofia), February 1, 1952:

"Studies so far prove that our herbs contain the drug santonin . . . which has been obtained in pure form, is now produced in quantities which not only satisfy our needs but allow for export. . . . The valuable antiworm drug, henopodium, until recently imported, has also been discovered. . . .

"The pharmaceutical department of the Vulko Chervenkov Medical School has discovered a new drug called antiparkin which combats sleeping sickness. . . ."

Otechestven Front (Sofia), October 24, 1952:

"The vaccine BCJ—the most effective drug against tuberculosis—is already being made in our country. . . . The dry form has great advantages over the liquid form. Dry vaccine remains good for a year, while liquid vaccine is only good for fifteen days after it is produced."

Vecherni Norini, December 22, 1952:

"The chemists Hariton Ivanov and Boris Yordanov of the Ministry of Public Health, along with Stefan Stevchev of the Galenus Factory, have worked out a method for obtaining ergotamin—pure alkaloid—from the indigo plant using local raw materials. From ergotamin, bellergamin is produced which is identical to imported bellergal.

"Engineer Bojan Patev and chemist Milko Nikolov have worked out a method of producing tubigal, identical in chemical compound and curative effect to the Soviet drug 'tubin.'

"Ivan Isaev, an assistant in pharmaceutical technology . . . has produced the drug zitizin by using local materials. By producing this drug in ampuls, imported lobelin has been replaced.

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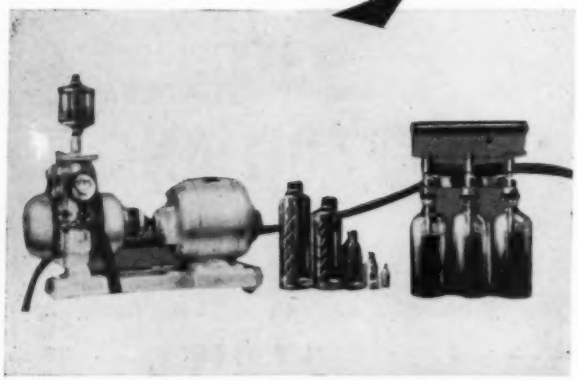

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"The chemists Georgi Tzenov, Virgilii Kamidulski and Boris Yordanov have created atropin sulfuric from local materials, thereby satisfying the need . . . for atropin."

Vecherni Novini, January 19, 1953:

"Until recently, antivariolous [smallpox] vaccin was obtained only as liquid. . . . Following the instructions of the Soviet doctor A. Ignatova, we have now obtained dry antivariolous vaccine using the method of Prof. Belaev from the Virus Institute at the Lenin Academy of Sciences.

"During December 1952, in the laboratories of the Institute of Epidemiology and Microbiology, a new antibiotic called eritrin was obtained. [It] is a dark brown, amorphous powder which is derived from red blood corpuscles. It is used against purulent wounds, burns, etc. [Its] effect is being tested in the Institute of Pediatrics, after which it will be mass-produced."

Radio Sofia claimed in a broadcast on February 14:

"The Bulgarian Chemical and Pharmaceutical Plant has mastered the production of hydrochloric morphine, which is used to treat pain and coughs. This plant also produces bionine ethyl morphine, papagenin, tempanin and other drugs. . . ."

A new penicillin plant is under construction in Razgrad. Work began in December 1952 (*Trud*, Sofia, December 10, 1952), but due to the lack of building materials little has been done (*Trud*, May 7, 1953).

Other sources report that Bulgaria is manufacturing piperazin, which is used to treat kidney disorders, gout and rheumatism. A bottle of this medicine costs eight *leva* (6.8 *leva* equal one dollar) and is a little smaller than those available in Italian pharmacies. Another medicine, called bellergamin, is used as a substitute for the famous Sandoz "Bellergal" in heart disease cases. This medicine is made by the Galenus plant. Each bottle contains 30 pills and costs 14.25 *leva*.

Other achievements were claimed for the Chervenkov Medical School by Professor Petur Popchristov, in his report broadcast over Radio Sofia on March 8, 1952:

"Our specialists on tuberculosis have found methods to detect earlier, treat better, and lower the death rate of tubercular pneumonia. They have demonstrated the excellent new drug, tubisal, which can be used in cases of pulmonary tuberculosis.

"A number of well-known but hitherto imported drugs for the treatment of common skin diseases have been synthesized, and a number of new drugs have been invented. Important work has been done on cardiac drugs, as well as on the production of vitamin concentrates from domestic raw materials.

"Our stomatologic faculty has studied problems connected with the production of medicaments for dental diseases and prophylaxis, as well as dental prosthetic materials. . . .

"One of the most important achievements of medical science during 1951 is the isolation of specific microbes found in the human mouth which, after being treated, have a curative effect similar to that of penicillin and the sulpha drugs on suppurative skin injuries, obstinate

wounds and diphtherial infection. In the last two cases, the drug has proven to be more effective than penicillin and a number of other modern drugs. . . ."

Distribution

Refugee reports reveal a lack of medicines and drugs similar to that existing in the other Satellite countries. The same black market operations also exist. Medicaments are to be had only on the prescription of officially recognized doctors and are difficult to obtain. Streptomycin, the drug most in demand, is available only on the black market. The official price is about 5,000 *leva* per ten grams. Rimifon is also very much in demand for TB treatment. Requests for PAS—another drug used in treating TB—are constantly being sent to Italy.

Vecherni Novini wrote on February 22 that "the Ministry of Health has ordered the customs not to deliver packages containing PAS—the new drug against tuberculosis—except on receipt of a permit issued by the health department to the sick person or his relatives."

Hungary

Before 1945, Hungary had a flourishing pharmaceutical industry: big drug factories such as Chinoin and Richter exported a considerable volume of drugs, especially to the Balkan countries, Latin America and the Far East.

These factories are still operating at full capacity, but no data are available on the amount, cost and distribution of the medicines and drugs they manufacture.

Pharmaceutical products were imported from Germany and Switzerland until the outbreak of the last war. At the present time some of these products are smuggled into the country, but the shortage of medicines is grave. In 1947 Hungary imported 853,000 *forints** worth of sodium bicarbonate from Austria (1.72 per cent of total imports), 3,188,000 *forints* worth of medicines (1.19 per cent of total imports) and 4,515,000 *forints* worth of sterilized cotton bandages (1.68 per cent of total imports).

At present, drugs are exported chiefly to the Soviet Union, China and North Korea, as well as to countries belonging to the non-Communist East (such as India). No further details are known.

One important pharmaceutical plant has been built under the Five Year Plan: the Hajdusagi Gyogyszergyar plant, in the vicinity of Debrecen, which began operations in June, 1952. It is modern but small, and primarily produces penicillin. The Budapest daily *Nepszava*, May 31, 1953, carried a report on the factory which revealed that a few grams of penicillin were first manufactured by the Chinoin factory in 1949. The article went on to say that the new factory is "a comparatively small one" and that its first-year plan was fulfilled 94.6 per cent.

Magyar-Szorjet Kozgazdasgi Szemle (Hungarian-Soviet Economic Review) mentioned the same factory in its January-February 1952 number.

"Our drug output will be increased 55.4 per cent and

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Another vacation season is rolling into the family histories of America. We will now all devote ourselves to picking up enough strength and money to be able to endure another two-week vacation next year.

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Most interesting vacation-time phenomenon for the younger set was the summer romance. This is the jointly held state of mind in which the youngsters pledge one another eternal love. This, of course, they also did last year, with two other people.

•

Biggest victim of each vacation continues to be Mother. After doing all the family's shopping and packing, she spends two more weeks listening to Father complain about all the work he's gotta do when he gets home.

•

Father, naturally, is the most thoroughly misunderstood member of the family. It began when he said he couldn't afford a vacation this year and continued through Pinochle losses that would've paid for a rocket ship to the moon.

•

Economical plans for next year are already underway. The family will arrange to alienate all relatives so that they can rent a bungalow without fear of uninvited guests on week-ends.

•

In other families, of course, next year's plans will follow individual tastes: Groups that hated a summer at the beach will arrange to hate next summer in the country.

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The Cosmetic Industry suffers a bitter-sweet melancholy at the end of the vacation season. After all, it's so much more comforting to say business is bad because all the customers are out of town.

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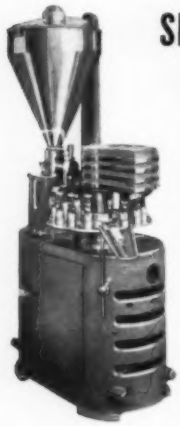

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the production of . . . ingredients 30 per cent compared to 1951. . . . A large sum will be appropriated for finishing the construction of the Hajdusag Drug Factory, which will become an important producer of antibiotics, second only to the one in the Soviet Union. . . . By [the end of] 1952 it will manufacture enough penicillin to meet not only domestic demands, but to allow for export."

An escapee who fled the country last year describes some of the conditions in the plant, and the difficulty in obtaining drugs.

"The Debrecen [Hajdusag] Factory began making penicillin regularly in September [1952]. The plant was equipped with machines imported from East Germany. The drug is packed for export to the USSR and is tagged with labels written in Russian. The output of sulfonamide is also shipped to the Soviet Union.

"Severe measures were recently introduced in the plant to prevent theft. All employees are now searched before leaving the factory. One woman was caught trying to smuggle medicine out of the plant. She explained that the doctor had prescribed the medicine for her child and that she had tried to get it at drug stores, but that it was not to be found anywhere. She tried to buy some from the factory, but her request was refused with the explanation that the medicine was not sold within the country. Since she could find no other way of procuring the medicine, she decided to steal some. Her case was reported to the police and she was sentenced to six months in prison by the Debrecen District Court."

The quality of domestically manufactured medicines and drugs is reportedly very poor and the people express complete confidence only in those products manufactured abroad.

A lengthy article appeared recently in the magazine *Magyar Technika*, No. 2, claiming new achievements in drug manufacturing. These claims appear somewhat excessive, particularly in the light of continual private requests in letters to the West for medicines and drugs.

The article read, in part:

"The pharmaceutical Research Institute and the Central Biochemical Industry Research Laboratory have initiated the manufacture of many new medicines. . . . The Chinoin Factory's new product, 'ultraseptil,' should prove very important as an export. The growing domestic demand and a rapidly increasing export require that experiments be made to find a cheaper way of manufacturing this drug. . . . As the result of successful experiments, certain raw materials which have formerly had to be bought on the Western market are no longer necessary.

"We have also succeeded in producing large quantities of chloramphenicol, the new antibiotic discovered in recent years. . . .

"Our successful anti-tuberculosis drive has been supported by the production of many very important drugs [tebaminal and thiomycid]. Soon we will be able to manufacture these drugs for export. . . .

"The Chinoin Factory has been producing Vitamin B_1

since 1938, but at a price far higher than on the world market. On the basis of the Soviet chemist Chelencev's theory, we have recently succeeded in manufacturing it to sell at a reasonable price. . . .

"The fact that most raw materials must be imported has hampered the progress of [the] pharmaceutical industry. Therefore the production of drugs from domestic raw materials of plant and animal origin is of great significance. The production of antibiotics, especially . . . can be further developed. Our greatest achievement is the manufacture, from domestic materials, of enough penicillin to cover both foreign and domestic demands.

"The making of Vitamin C is also based on the use of materials derived from agriculture. . . . A new production method based on Soviet data has made it possible for us to establish our first Vitamin C plant.

"Drugs derived from animal matter, which we have worked out a method of producing, include thrombin, which effects the clotting of blood and which we produce in sufficient quantity for export; and fibrin [in the form of] powder, foam and sheets. . . .

"The Szeged Microbiological Institute has succeeded in working out a method of producing a liver extract containing B_{12}. Now we have an effective . . . product at our disposal for treating persons suffering from anemia. . . .

"This year, we will begin making the important drug ACTH, which has proved effective in the treatment of rheumatic fever and other illnesses. . . ."

The newspaper *Magyar Nemzet* carried an article about the new liver extract in its May 7 issue, asserting that:

"Kossuth Prize - winning academician Gyorgy Ivanovics, and the associates of the Pharmaceutical Research Institute, have been conducting experiments since 1949. They have now succeeded in simplifying the production of a liver extract containing Vitamin B_{12} and in producing it in a form easy to apply. The new extract has proved very effective in hospital experiments, and is as good as similar drugs produced abroad. . . . The new drug will be called 'Neoperhepar.' We are already receiving substantial orders from abroad."

Last November, *Magyar Nemzet* (Budapest), reported that a new drug called "Isoniacid" is also being manufactured.

Latvia

During Latvia's independence, the Ministry of Public Welfare supervised the execution of health measures in compliance with comprehensive public health laws. An extensive network of medical institutions covered the country. Three-fifths of the population were insured against sickness through membership in the health insurance system. The latter provided free medical treatment and drugs. These drugs were

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both manufactured locally and imported from Germany, Switzerland, England and other countries. Extensive research was carried out in the State Pharmacy and its enterprises. A number of private research laboratories also produced high quality drugs. Latvia was among the leading insulin-producing nations. During the last war, this drug was entirely confiscated by Germany.

Under Soviet occupation in 1940-41, the system of manufacturing drugs was altered. All private laboratories were nationalized and a joint pool of laboratories and pharmacies was established. Pharmacies were ordered to produce only a few specific medicines not being made in the USSR. Such products as vitamins, now imported from the Soviet Union, proved to be of inferior quality. Escaped pharmacists report that Vitamin C proved to be nothing more than pulverized fern needles. Packaging was very inferior and contents varied from 0.5 grams to 2.5 grams when listed as 1 gram. The production of most patent-drugs was stopped and such medicine as eledron, eubasine, cybasol, etc., were imported from the USSR.

Just before World War II the Latvian government had made large purchases of vital medicaments from abroad and all pharmacies had large reserves in stock. The Russians shipped all stocks stored in warehouses to the USSR, but left the reserves located in pharmacies. These latter were sold, free, to both Latvians and the Russian occupation forces.

Since then, insurance funds have been dissolved and new, increased payments set up. Prescriptions must be paid for individually by the recipient. Prices remain about the same, but as they have been adjusted to the *ruble*, pharmacies have suffered a considerable loss. Prescriptions are handled by so-called "polyclinics" (Soviet medical centers). Doctors are not permitted to visit patients in their homes except on orders from the "polyclinic."

No information has appeared in the Soviet Latvian press or on the radio regarding drug production, although it is known that such production is still carried on.

Lithuania

A plant for the production of drugs was established in Kaunas after the First World War. This plant is now nationalized and operated by the Ministry of Public Health. Production is limited and most drugs are imported from East Germany and the USSR. Prices are high. A great number of medicines and drugs are unavailable.

The scarcity of drugs is evident from the many letters sent to the West asking for streptomycin and other antibiotics. As there has been no information concerning the fate of these drug shipments, many westerners have refrained from answering further requests.

The Ministry of Public Health has published a pamphlet on the use of a new medicine called testosteronepropionate which is described as an "anti-

diphtheria serum" and recommended for "toxic and hypertonic dysentery."

A young doctor complains in the newspaper *Tiesa* that there is no such disease as "hypertonic" dysentery, that the term is "hypertoxic" and that the serum is not an anti-diphtheria, but an anti-dysentery one. He also pointed out that the pamphlet recommends administering the serum by "intravenal" injection, which would be extremely harmful as the serum is made with fat. He states that it should be injected into a muscle, not a vein.

The reason given for this confusion was that the instructions, written in Russian, were carelessly translated and that the translator didn't bother to differentiate between muscles and veins, tonics and toxics, or dysentery and diphtheria.

Albania

Before the last war Albania imported drugs chiefly from Germany, Italy and France. Since Communist seizure of the country one "pharmaceutical laboratory" has reportedly been established in Tirana, but no further information has appeared. The principle source of drugs at the present time are gift packages received from the United States, Italy and Australia, a considerable number of which have entered the country. Most of the contents of these packages are confiscated by the government, which buys them at very low prices or in exchange for Soviet-made drugs.

Pharmaceutical Classifications

(*Continued from page 321*)

A great many of these so-called dosage form houses operate within limited areas in which they have rather excellent reception from the doctors and druggists. In many instances they are able and willing to sell their products at more modest prices than their nation-wide competitors, and this brings them large amounts of business in many directions. The low prices are due to many factors, including the fact that their research is extremely limited, they do not have extensive detail staffs, and their advertising budgets are very limited or non-existent. They sell their goods through salesmen who are well acquainted with the buyers.

So as the pharmaceutical manufacturing industry expands, as it has done greatly within recent years, it breaks down into various classifications. Furthermore, its problems multiply as its size grows. We will have more on these problems at a later date.

Fair Trade Problems

(*Continued from page 315*)

manufacturer of a commodity not affected by a public interest, and to that extent the McGuire Act is ineffective. . . .

"Under fair trade the price level is probably higher than would obtain under active price competition. The wisdom of fair trade from the social aspect is at least

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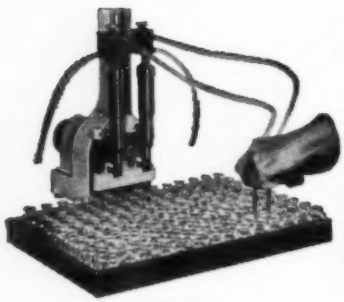

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debatable, even though uneconomical in a particular sense. A court is concerned with legality, not social, economic or political philosophy.

"Competition, whether desirable or not, must be lawful, as is clearly indicated by the many laws which give redress where it is unlawful. Suppression of competition is incompatible with the precepts of a free society."

However, following this decision, Windsor-Fifth Avenue, (also known as Two Guys from Harrison) appealed to the Appellate Division of the New Jersey Superior Court in an attempt to upset an injunction issued against them by Equity Judge Thomas J. Stanton on application of the Sunbeam Corporation. The Appellate Division, however, refused to upset the injunction. This action did not overrule the action of Judge Freund in the Lionel case, but it does mean that fair trade in New Jersey will be very uncertain until the question is ruled on by the supreme court of that state.

Fair trade was invalided in Tennessee by a decision of the Supreme Court of that State, but a rehearing is being sought. In upholding the ruling of a Shelby County Chancery Court, the Supreme Court of the State, in an action brought by Clavert Distillers, said:

"We feel that until the McGuire Act has been passed on, preferably by the Federal courts, the chancellor was well within his discretion in denying an injunction in the instant case."

In denying the injunctions sought by Calvert against liquor retailers, the Supreme Court based its opinion on the Schwegmann decision of the U. S. Supreme Court. Denying Calvert's contention that this decision was no longer pertinent as the result of the enactment of the McGuire Act, the court held that the applicability of the new law is in question since it never has been passed upon "by any court insofar as we can find or have been advised."

A recent action in Florida by Sunbeam Corp. against Chase & Sherman has resulted in the Circuit Court of that State upholding the Florida fair trade act. However, this act has never been passed on by the Supreme Court of the State of Florida.

In regard to Georgia, Oneida, Ltd., has asked the U. S. Supreme Court to review the decision of the Georgia Supreme Court which held that the Georgia fair trade act is null and void because (1) it is contrary to and inconsistent with the terms of the Sherman Act before the Sherman Act was amended by the Miller-Tydings Act and the McGuire Act, and (2) having been enacted prior to these Federal enabling acts, the Georgia act could not become valid except by re-enactment.

Before the Oregon Supreme Court is the case of the Federal Cartridge Corporation against Helstrom. The question before the court is whether a non-signer who knowingly advertises and sells a fair-traded commodity below the price stipulated in a fair trade contract may

claim immunity from sanctions of the Oregon statute because the commodity, which is sold in interstate commerce, was purchased by him prior to the date of the enactment of the McGuire Act. No decision is anticipated before October.

Perhaps the most anxiously awaited decision is that in which Schwegmann is appealing to the U. S. Supreme Court in the case brought against Schwegmann by Eli Lilly. This case was decided in Lilly's favor by the Federal District Court in Louisiana, and this decision was upheld by a 2 to 1 decision in the Fifth Circuit Court of Appeals.

While the District Court raised many questions which the Judge thought should be passed on by the U. S. Supreme Court, the majority opinion of the Circuit Court of Appeals passed the case along by confining itself to the legal issues involved. Said the decision:

"We find nothing in the Louisiana Fair Trade Act or the Federal Act itself defeating or violative of the Constitution of the United States . . . We have no judicial concern with the economic and social wisdom of any feature of the law, but solely with its constitutionality."

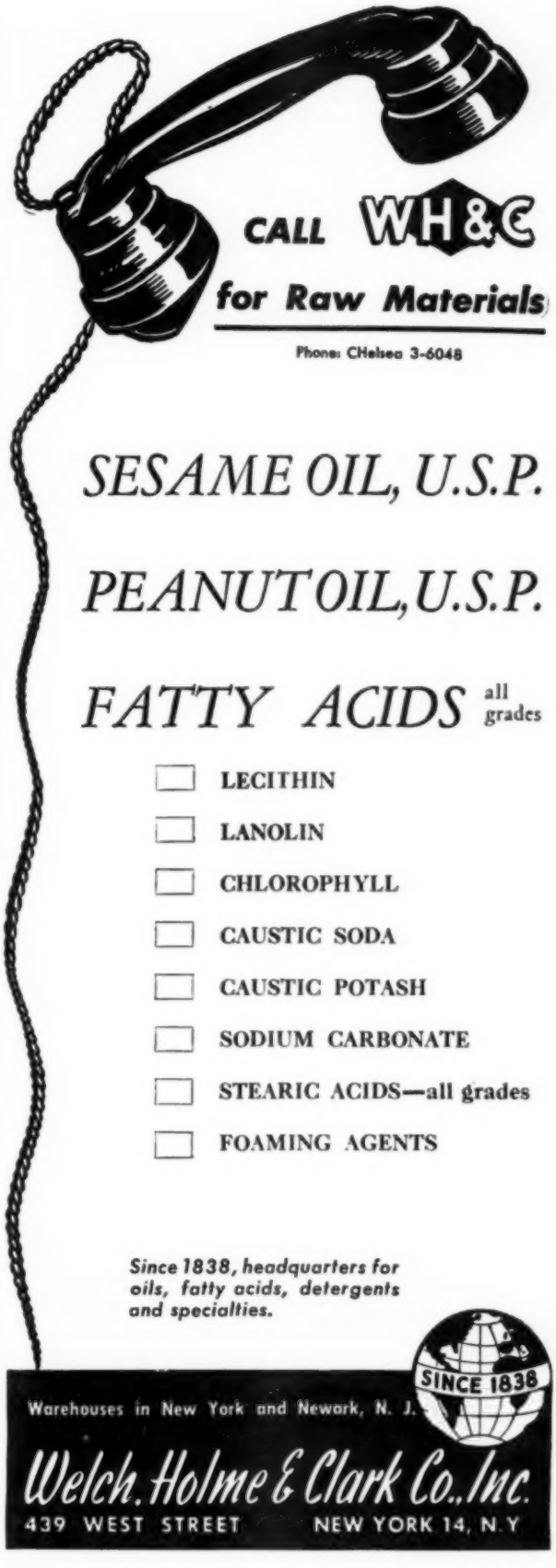
Factory Inspection Restored

(Continued from page 317)

factory, warehouse, or establishment in which food, drugs, devices, or cosmetics are manufactured, processed, packed, or held, for introduction into interstate commerce or are held after such introduction, or to enter any vehicle being used to transport or hold such food, drugs, devices, or cosmetics in interstate commerce; and (2) to inspect, at reasonable times and within reasonable limits and in a reasonable manner, such factory, warehouse, establishment, or vehicle and all pertinent equipment, finished and unfinished materials, containers, and labeling therein. A separate notice shall be given for each such inspection, but a notice shall not be required for each entry made during the period covered by the inspection. Each such inspection shall be commenced and completed with reasonable promptness.

(b) Upon completion of any such inspection of a factory, warehouse, or other establishment, and prior to leaving the premises, the officer or employee making the inspection shall give to the owner, operator, or agent in charge a report in writing setting forth any conditions or practices observed by him which, in his judgment, indicate that any food, drug, device, or cosmetic in such establishment (1) consists in whole or in part of any filthy, putrid, or decomposed substance, or (2) has been prepared, packed, or held under unsanitary conditions whereby it may have become contaminated with filth, or whereby it may have been rendered injurious to health. A copy of such report shall be sent promptly to the Secretary.

(c) If the officer or employee making any such inspection of a factory, warehouse, or other establish-



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ment has obtained any sample in the course of the inspection, upon completion of the inspection and prior to leaving the premises he shall give to the owner, operator, or agent in charge a receipt describing the samples obtained.

(d) Whenever in the course of any such inspection of a factory or other establishment where food is manufactured, processed, or packed, the officer or employee making the inspection obtains a sample of any such food, and an analysis is made of such sample for the purpose of ascertaining whether such food consists in whole or in part of any filthy, putrid, or decomposed substance, or is otherwise unfit for food, a copy of the results of such analysis shall be furnished promptly to the owner, operator, or agent in charge.

Sec. 301 (n). The using, in labeling, advertising or other sales promotion of any reference to any report or analysis furnished in compliance with section 704.

Sec. 304 (c). The court at any time after seizure up to a reasonable time before trial shall by order allow any party to a condemnation proceeding, his attorney or agent, to obtain a representative sample of the article seized and a true copy of the analysis, if any, on which the proceeding is based and the identifying marks or numbers, if any, of the packages from which the samples analyzed were obtained.

A Review of Permanent Waving

(Continued from page 323)

make or break a product. It might be achieved by using one of the polyethylene glycols, or Carbowax in the base. I have developed a suitable base which might be somewhat modified, with but little effort. This formula has a pH of 9.25, and has an oven stability that exceeds 90 days.

Polyethylene Glycol 6000	**2.19**	**per cent**
Cetyl Alcohol	**13.08**	" "
Stearyl Alcohol	**8.59**	" "
Triethanolamine Lauryl Sulf.	**1.09**	" "
Propylene Glycol	**16.28**	" "
Water	**42.84**	" "
Ammonium Thioglycolate, 53 per cent	**10.45**	" "
Ammonium Hydroxide, 28 per cent	**3.29**	" "
Perfume	**2.19**	" "

The above formula is very easy to rinse from the hair, and the writer has obtained excellent results in eight out of the ten subjects that it was tried on. Two of these subjects had weakened their hair by the use of caustic straighteners and the results obtained from them were classed as unreliable.

The method of manufacture is comparatively simple. All of the components are heated together with the exception of the ammonium thioglycolate and the ammonium hydroxide until an emulsion is formed. The emulsion is then either cooled, or allowed to cool, as the case may be, to 100°F, or lower, after which the

active ingredients and the perfume are added. The product should be packaged in an opal or amber jar, to protect from light, with plastic caps to protect from metallic contamination.

The controls on this product are the same as those pertaining to the permanent wave lotion. Samples should be heated, refrigerated, and stored on a shelf, at variable room temperatures, for a period not less than thirty days to insure product stability. As for the other controls, such as pH and Iodimetric titration, I have not as yet collected sufficient data to enable me to present the methods here.

In conclusion, it should be remembered that in the manufacture of a hair straightener, as well as a waving lotion, it is necessary to prevent the product from coming into contact with iron. The straightener should be made in an aluminum tank or a stoneware crock, with an aluminum mixer. All connections must be either of aluminum or Saran plastic and the product should be filled through an aluminum Colton or other filling machine.

Sources of Drug Market Data

(Continued from page 329)

Drug Store Statistics

Statistical information on drug stores, the industry's chief outlet for its products, is broad in scope. Location and number of drug stores, sales, sales per U. S. family, drug sales by city, inventories, drug store failures, wholesale prices of pharmaceuticals, drug store profits and margins are typical of the statistical data requested in this field. The *Monthly Retail Trade Report*, *Survey of Current Business*, *Business News Reports* and the Sales Management *Survey of Buying Power* are all publications of interest for statistical data on drug stores.

Financial and General Data on Pharmaceutical Companies

Financial and general statistics available on pharmaceutical companies and the industry as a whole are readily available. *Moody's Services* and *Standard Poor's Services* supply data on the history, capital structure, commerce share earnings, dividends, income, inventory turnover, price earnings, ratios on the individual pharmaceutical companies. The *Monthly Labor Review* contains statistics in each issue on the number of employees in the drug industry, monthly labor turnover rates, and hours and gross earnings of production workers. The *Census of Manufactures* includes statistics on number of employees, wages, value of products. Data are presented for the pharmaceutical industry as a group and separately, by geographic divisions and of states.

Summary

The major sources of market and economic information on the pharmaceutical industry have been dis-

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cussed. An annotated bibliography, including all sources mentioned in this discussion and a number of supplementary sources, is appended to this paper.

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Census of Manufactures, 1947. 3v. and supplement. 1950. U. S. Department of Commerce, Washington, D. C.

General Summary, v. 1. Gives general statistics on size, personnel, type of organization, etc. for the drug industry. Statistics by Industry, v. 2. Statistics cover such subjects as the number of establishments, wage earners, wages, cost of materials, value of products, and value added by manufacture. Data are presented for industry as a group and separately, by geographic divisions and by states. Statistics by States, v. 3. Detailed statistics on number of establishments making drugs and medicines, employees, value of products, percentage of value represented by cost of materials and manufactures, etc. for each of the 48 states, the District of Columbia, Alaska, Hawaii, in all counties and cities of more than 10,000 inhabitants.

Product Supplement. Quantity and value of shipments of more than 6,000 products manufactured by U. S. industry.

National Prescription Audit. Bi-monthly. Research Society, Boston.

Analysis of 225,000 prescriptions per year. Data on per cent of prescriptions, per cent dollar volume, average prescription prices, pieces of direct mail, and new products of prescriptions analyzed. Number of different drug forms to fill specialty prescriptions, number of one ingredient prescriptions, and ingredient of prescriptions by manufacturers also given.

Associated Prescription Panel Service, Collaborator Report. Monthly. Market Research Associates, Darien, Conn.

Prescription analysis of 33,000 prescriptions per month. Data on the number of times prescription specialties were used out of total prescriptions analyzed.

Ethical Drug Audit. Quarterly. Dun and Bradstreet, N. Y.

Data on the market position of producers of specified prescription specialties; market position, by classification of the market for specialties; percentage distribution of purchases among various classifications of the market. Data on product, form, volume, and strength of specialty.

Modern Medicine Topics. Monthly. Modern Medicine, Minneapolis.

Statistical reports on incidence of diseases, physicians, prescriptions, etc.

Pharmaceutical Index. Bi-monthly. A. C. Nielsen Co., Chicago.

An audit of the invoices of 800 drug stores of drug pharmaceutical products. Data are projected into national totals, and broken down by territories, county sizes and store types.

Lilly Digest. Annual. Eli Lilly and Company, Indianapolis.

Statistics on drug store costs, margins, profits, prescription prices, and refills.

Drug Topics. Bi-weekly. Topics Publishing Co., New York.

Includes annual surveys of what the public spends for health goods bought through drug stores; the vitamin market; first aid goods department; prescription census; and forecast of trend of sales, prices, stocks, gross margins, etc.

American Druggist. Bi-monthly. Hearst Corp., N. Y.

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Current estimates of population by state, age, sex, martial status, etc. Several series are published at various times.

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Monthly tabulation of death rates per 100,000 policyholders from selected causes. Includes special surveys of disease incidence of all types.

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Lists industrial commodities, the total imported from all countries, and for each commodity information on the amount of each country from which imports are $10,000 or more.

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List of pharmaceutical specialties available in the United States. Prices and form are included.

Facts and Comparisons. 314p. 1953. Monthly revisions. Facts and Comparisons, Inc. St. Louis.

List of pharmaceutical specialties available in the United States. Products of like nature are arranged together. Content, dosage, and price given.

Unlisted Drugs. Monthly. Special Libraries Association, Pharmaceutical Section, N. Y.

List of recently introduced domestic and foreign drug specialties. Gives chemical name, action, dosage, and literature reference for each specialty cited.

Sales Management Survey of Buying Power. Annual. Sales Management, N. Y.

Statistics on drug store sales per U. S. family by states; drug store sales for 200 leading counties; estimated retail drug sales by city; county metro-

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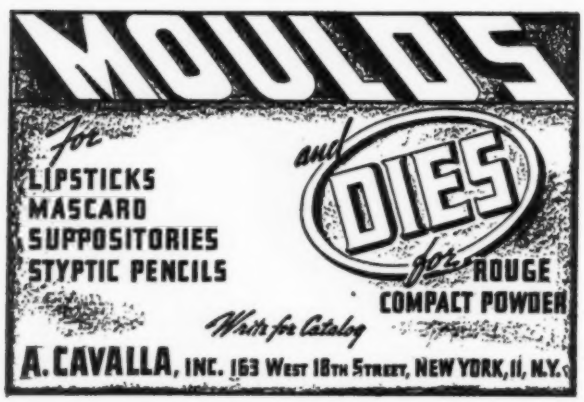

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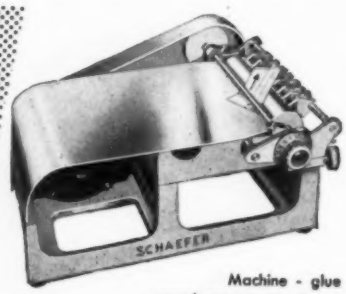

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Business News Report. Monthly. U. S. Department of Commerce, Washington, D. C.

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Wholesalers' Sales and Inventories section: Gives monthly estimated wholesale sales and inventories of drugs and sundries.

Dun's Statistical Review. Monthly. Dun & Bradstreet, N. Y.

Monthly statistics on the number of drug store failures and their current liabilities.

Census of Business, 1948. 7v. 1951-1952. U. S. Department of Commerce, Washington, D. C.

Retail Trade, v. 1-3. Commodity sales, inventories, employment payroll of drug stores.

Wholesale Trade, v. 4-6. Basic statistics on wholesale trade including drugs (general line) and drugs and drug sundries, showing operating expenses, payrolls, commodities sold, size of establishments, classes of customers, organization, etc.

Survey of Current Business. Monthly. U. S. Department of Commerce, Washington, D. C.

Contains monthly statistical data on employment and wages, production and distribution, retail sales of drug stores, and an index of wholesale drug prices.

Monthly Retail Trade Report. Monthly. U. S. Department of Commerce, Washingon, D. C.

Gives statistics on estimated monthly sales of retail stores, including drug stores; percentage change in sales of retail stores, including drug stores.

Hayes Druggists Directory and Commercial Reference Book. Annual. E. N. Hayes, Detroit.

Retail druggists with their financial standing and credit rating; drug wholesalers; drug chains; department stores having a full drug and toilet-goods departments.

Standard and Poor's Services. New York.

Listed Stock Reports. Quarterly. Financial analysis for individual companies. Data on common share earnings, dividends, income, capitalization, etc.

Industry Surveys, Drugs and Cosmetics, Basis Analysis. Annual Financial analysis of the industry. Data on sales records, inventory turnover, profit margins, dividend policies, and price-earnings ratios for the industry. Income account and balance sheet statistics for individual companies since 1939.

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Survey of American Listed Corporations: Data on Profits and Operations. Annual. U. S. Securities and Exchange Commission, Washington, D. C.

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Drug Trade News. Bi-weekly. Topics Publishing Co., N. Y.

Publishes annual analysis of the financial statements of pharmaceutical companies.

Federal Reserve Bulletin. Monthly. Federal Reserve System, Washington, D. C.

Statistics on wholesale prices of drugs and pharmaceuticals.

Monthly Wholesale Trade Report. Monthly. U. S. Department of Commerce. Washington, D. C.

Statistics on drug wholesalers' sales and inventories; geographic division included.

Monthly Labor Review. Monthly. U. S. Department of Labor, Washington, D. C.

Statistics on number of employees in drug industry; monthly labor turnover rates; hours and gross earnings of production workers.

Oil, Paint and Drug Reporter. Weekly. Schnell Publishing Co., N. Y.

Record of conditions and prices in industrial markets for chemicals and drugs.

Chemical Facts and Figures. Annual. Manufacturing Chemists Association, Washington, D. C.

A handy compilation of government and other statistics on production and consumption indexes, hours and earnings, financial and tax data, foreign trade, wholesale price indexes, etc.

Economic Almanac. Bi-annual. National Industrial Conference Board, New York.

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Statistical Abstract of the United States. Annual. U. S. Department of Commerce, Washington, D. C.

Statistics from various sources on drugs and druggists preparations, which include cost of material used in production, value of manufacture, indexes of employment and payroll, average hours and earnings of employees, corporation income tax returns, excise taxes and foreign trade. Also statistics on trade of drug stores; wholesale prices for medicinal and pharmaceutical preparations, and expenditures by states for health and sanitation.

Chemical Market Report. Monthly. Foster D. Snell, Inc., N. Y.

An index and summary of significant published data in trade journals, government publications, scientific journals, and house organs in the field of chemical marketing, research, supply and development.

Chemical Economics Handbook. Annual. Stanford research Institute. Palo Alto, California.

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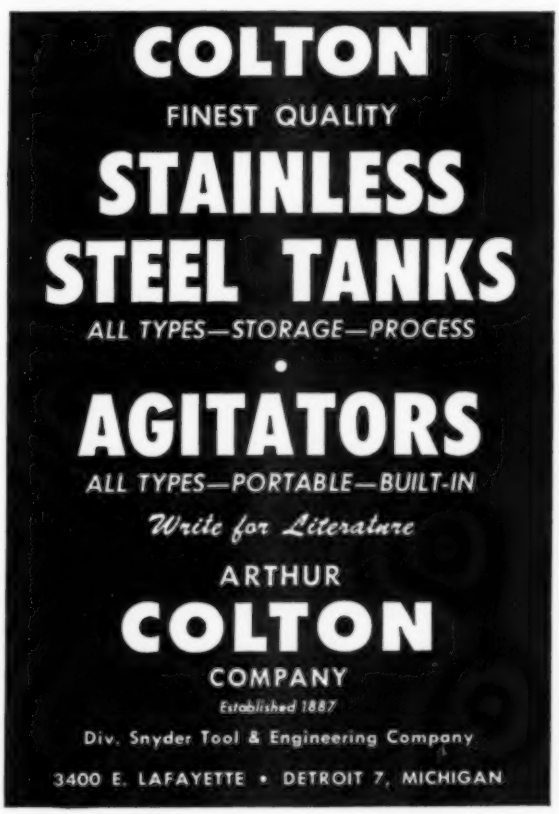

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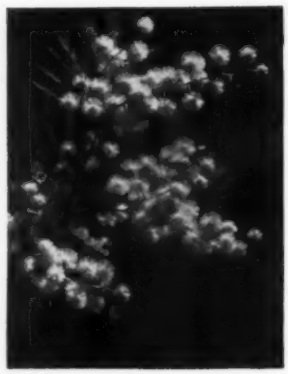
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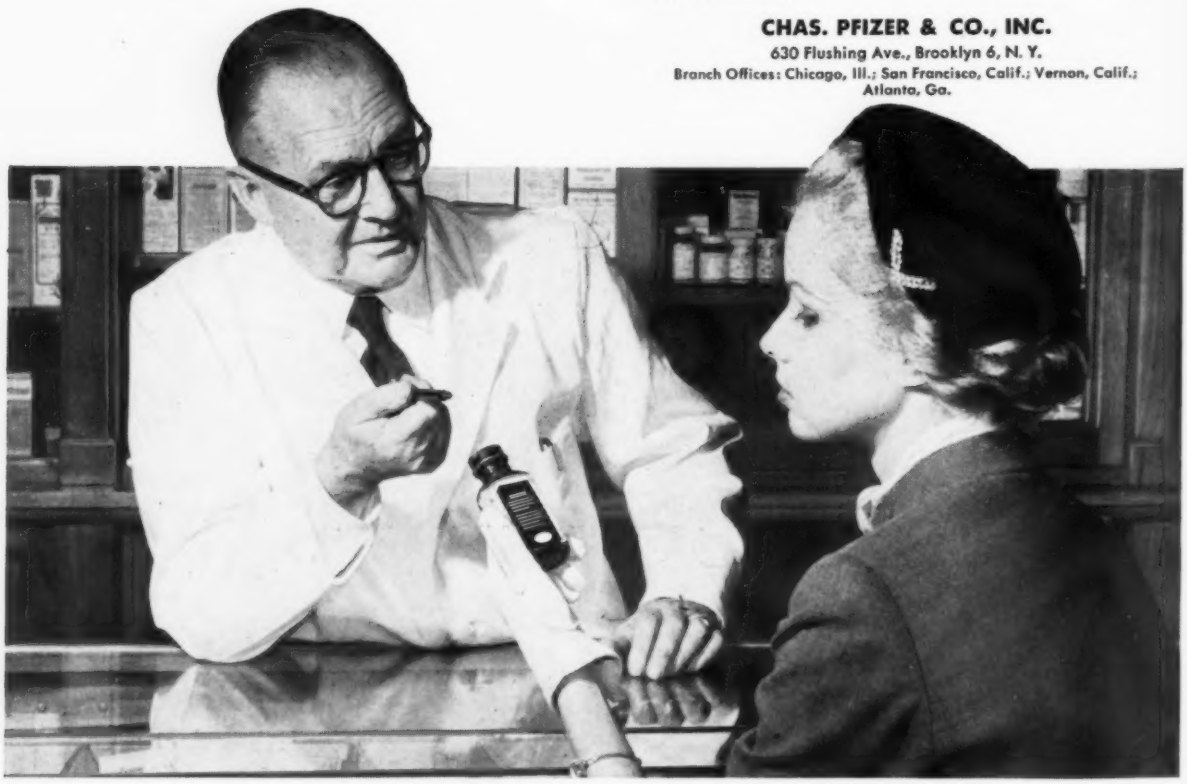

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